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## ORIGINAL ARTICLES.

### "SUGGESTION" IN THE CURE OF DISEASE.\*

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The word "suggestion," as here used, is meant in the same sense as where used by writers on hypnotism, and may be best understood by a history of some cases in practice.

Mrs. D., aged twenty-six; married five years; two children; family history neurotic; was in fair health until three years before this history begins, when, after the loss of a child she became an invalid and went to bed. She complained of pain in her left side just below the ribs and some times extending down into the pelvis, but was not sensitive to pressure. After careful examination no organic disease could be found. She would lie always in one position on her back, with several pillows under her head and the head drawn forward on her chest. Her arms rested on the elbows, with the right hand open and the fingers held straight, while the left hand was open but strongly flexed at the wrist. All the muscles of the body were held rigid, and she would lie in this position for days at a time without moving except when compelled to do so. She did not feed herself nor take any care of her person. The urine dribbled away as it formed and the stools were not always controlled. She was not pleased to be told she was looking well and would never admit that she felt better. Her appetite was good and she was very well nourished. She had many little whims—she could not talk if

the door of the room stood open, and, in having her face washed, a certain number of motions must be made in just certain directions,—and she would become very angry if things were not done as she wished. When asked a question it would take her a long time to begin to answer, not because she did not know what answer to make, but apparently because she could not get her muscles to act. When she did speak it was in a very high pitched key and in a jerking manner. She said it hurt her side to talk low, and it hurt her side to take any other position—everything was accounted for by the pain in her side. She did not want to get out of bed and she did not expect to get well. She was sure no one could cure her and she did not seem to care to be cured. There was some loss of mental power, although she seemed quite rational on all points except that she thought she could do nothing and that she suffered a great deal of pain.

I decided to try the effect of "suggestion" alone, and for that purpose took her into my private hospital. At first I hypnotized her every day, and when under that influence her muscles would relax and she would get up and walk with a little help. I would say to her, "Now you can walk—your arms are limber now—you can get them above your head—you can hold your head up straight—your side does not hurt you any more. I have taken the pain all away—you can talk easily now."

\* Read before Western Association of Obstetricians and Gynecologists, 1892.

When hypnotized she would do just as I suggested and believe just what I told her. After a few weeks it was not necessary to hypnotize her, but I made the same suggestions and she would obey in the same way. She soon learned to walk, to feed herself, to control her urine and her bowels and to take care of her person and of her own room. She stopped complaining of her side, wrote a great many letters, talked quite well and was able to go to her home in Texas.

A similar case was Miss N.; aged thirty-four; family history good; from childhood had not been strong—who complained of a great deal of pain through the chest and about the heart. For many years she was obliged to spend months at a time in bed, and, at the time I saw her, she had been confined to her bed for two years and seven months. She had cramping spells in which the hands would clench anything within reach. The muscles would all become rigid and the head would be drawn down on the breast or, at times, thrown backward. A dry spasmodic cough often seized her. Her cramping and coughing spells were terrible to see.

After one of these attacks she would lie exhausted and unable to speak for a time. No organic disease was found, and treatment by suggestion was begun at the hospital. Her pains could all be relieved immediately, and she could get up and walk, although, from their long disuse, her limbs were very weak. The pain would be relieved, at first but a short time, but it staid away longer after each trial. It was soon found unnecessary to hypnotize her to relieve the pain. All that was necessary was to say, "I will take that pain all away," and laying my hand over the pain would say, "now it is gone—you have no more pain," and to the surprise of the patient herself she would be free from pain. Although it is now less than three months since treatment was begun, she gets up alone, walks to her meals, takes care of her own person, attends to the calls of nature alone, and from being a constant care night and day, she is a very independent person and is gaining strength rapidly.

Obstetrical cases are peculiarly amenable to this treatment, and I will cite one case: Mrs. M., aged thirty; primipara; labor pains very severe and fifteen minutes apart; presentation normal but no dilatation of

os uteri. I told her labor would be very slow but I could put her to sleep so the pains would not hurt her. She proved an excellent subject, and, although the contractions came regularly, she said there was no pain about it, and she lay as if about half asleep. I hypnotized her about every six hours for three days, when I delivered her with forceps, and that operation was almost painless. The effect of the suggestion would seem in this case, to wear away in about six hours and have to be repeated.

I never use the words "mesmerize" or "hypnotize" to a patient, but simply say "I can put you to sleep and relieve that pain," and it must be said earnestly and with confidence. The patient is told that, if he will look intently at what I show him and keep his mind fixed on one thing, such as going to sleep—which he may repeat over and over to himself—in a few minutes his eyes will become heavy and he will not be able to hold them open, but they will close and he will fall asleep and then I will relieve all pain. In this way he is expecting just what you wish and, if you have his confidence, in a large percentage of cases you will succeed. A lead pencil is held about six inches in front of the eyes and when you see the effect of the eye strain you may say, "your eyes are getting red, they are beginning to water, the lids are getting heavy, you are getting sleepy—so sleepy, your eyes are going shut, you can not hold them open" and you keep suggesting just at the right time until you will see the pupils suddenly dilate, the eyes will close, and with a little tact the patient is under your control and you can relieve all pain.

I have often been surprised at the effect of the same suggestion when the patient was not hypnotized. Who has not used a placebo and seen it have just the effect suggested? It is well known that a hypodermic injection of water will often relieve pain, especially when a patient has been relieved by morphine used in this way. Our country is full of ignorant men who call themselves "Magnetic Healers," and if there was no demand for them they would have to go out of business. It is certainly true that they relieve pain and often encourage patients through long spells of sickness, such as typhoid fever, and they relieve many cases of so-called paralysis, yet their only stock in trade is

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"suggestion." The christian scientist and the faith healer, although following slightly different methods, get their influence in the same way. If they can have some success, how much more can be accomplished by an intelligent physician who knows the laws of hypnotic suggestion and who knows when to apply them.

Obstetrical cases are good ones for the practice of suggestion, because usually there is rest enough between pains to get the patient's mind fixed on one thing, which is difficult to do while a severe pain lasts. I often find it better, in hypnotizing a patient in severe pain, to first use a hypodermic injection of morphine and to follow it by suggestion, but this is unnecessary for a patient who has been often hypnotized. Undoubtedly the best effects of suggestion can be obtained on patients hypnotized, but very much can be done without this.

The objections to hypnotism are the unsavory reputation one is likely to gain by practicing an art not well understood in which so much influence is obtained, and, also, the length of time required.

To prepare a patient for a case of con-

finement or for a surgical operation, she should be hypnotized several times a week until it can be well done. It is always best to *do* something or to *give* something to make it appear reasonable to the patient that your words be true. It is not difficult, usually, to cause a nervous patient to have a certain number of hours sleep by giving a powder of bismuth, and at the same time suggest, *often and earnestly*, that it will surely have this effect. I sometimes wonder what pain is that it can be relieved by such means. I often tell a patient while hypnotized that at a certain hour the next day, or the next week, he will do some certain thing, and at just the hour stated he will do it. Yet before the time comes he cannot tell anything about it, and after it is done he cannot tell why he did it. The thought comes to him just as any impulse may come.

How many of our acts and beliefs may be due to unconscious suggestion? And how much physicians may accomplish by it none of us can tell, but surely it is a remedy of great power and needs further investigation.

## COMMUNICATIONS.

### UTERINE COMPLICATIONS, THEIR TREATMENT AND MISTREATMENT.\*

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The subject selected may be threadbare, yet the fabric is of sufficient integrity to justify the attempt to construct an article of perhaps some value from the remnant.

I shall pay particular attention to displacements of which we have a varied host, as regards the degrees of position:

First, *Versions* as theorized by our predecessors and the majority of gynecologists of the present day.

Second, *Flexions*.

Third, *Prolapsus*.

I assert that ante-version is a misnomer and release it from my category. Retro-version, the flexions and prolapsus we find in their varying phases, distinct and complicated. Retro-version being of comparatively slight importance, when uncomplicated, I shall not dilate on. It serves

only as a stepping stone to worse troubles.

Though I assume all gynecologists are conversant with the different displacements, the different degrees of position are important as regards their effects and complications and merit due attention.

It is quite common to meet with cases where the fundus is so flexed as to rest on the bladder, pressing hard thereon, the os in its normal position, pointing backward at different degrees, and in some cases, pointing forward in a magnet shape, or even bent upon itself.

Next we find retro-flexion, in all the varying degrees which characterize ante-flexion, the fundus pressing the rectum to a greater or less extent, the os pressing on or near the bladder, down and forward at different angles, or backward, forming again the horse-shoe, or tightly flexed upon itself.

\* Read before the Western Association of Obstetricians and Gynecologists, 1892.



The flexions not uncommonly take on the form of inversion, while more rarely, adhesions, or other causes, bring about lateral displacement.

Finally, the worst of the displacements is prolapsus, particularly when complicated with one or more of the other forms.

As regards causes for any of these conditions it would be an unpardonable infraction on your time and patience to attempt an explanation, there being nearly as many causes for these abnormalities as there are females suffering from the effects thereof.

With rare exceptions, by the time a flexion exists, or before, we have inflammatory troubles, an endometritis perhaps, but usually more extensive invasions have been made in the uterine tissues, and in the adjacent parts.

The cause and duration of any of these difficulties must largely determine the extent and physiological changes, and the resulting complications.

Although the flexions differ somewhat as regards position, they produce in their general effects a marked similarity, locally and constitutionally. To illustrate, an ante flexion, causes practically the same tension on the natural supports of the organ, and the same mechanical pressure, considering the degree of flexion, on the other pelvic organs, nerves, etc., as does the retro flexion.

With this exception, however, the former produces a more serious effect on the urinary organs, and the latter a correspondingly greater effect on the rectum with a resultant tendency to constipation.

These two points, while not infallible, are an excellent guide in diagnosis, when an examination is denied us, or previous to making the same.

Adding to this schedule of abnormalities, inversions, stenosis, elongated cervix and subinvolution, we have an expansive foundation for a list of complications which follow in variations most multitudinous:

Constipation.  
Incontinence.  
Cystitis.  
Vaginitis.  
Cellulitis, Peritonitis.  
Metritis, Endo- and Perimetritis.  
Salpingitis.  
Ovaritis and inflammation of the relative parts.  
Adhesion.  
Ulceration.  
Abscess.  
Hysterorrhea.

Granulations.  
Amenorrhœa.  
Dysmenorrhœa, Vicarious Menstruation.  
Menorrhagia.  
Menorrhœa.  
Neuralgia and other neuroses.  
Abdominal, pelvic, lumbar and other reflex pains.  
Headache, Vertigo.  
Melancholia, Nervousness and Hysteria.  
Anæmia.  
Leucorrhœa.  
Acquired pulmonary consumption.  
Pregnancy, Abortions.  
Extra Uterine pregnancy, Hæmatocœle.  
Fibroids and other Tumors, such as Sarcoma.  
Intraligamentous, Multilocular, Unilocular and Dermoid Cysts.  
Cancers.

In tabulating this list of complications I do not in the least exclude the possibility of other difficulties producing symptoms and conditions which resemble those of uterine origin, any more than I would assert a woman has no organ but the uterus which disease may attack. Many of the difficulties above enumerated exist independently of those under consideration.

We may meet with almost any number of fibroma and myomatous tumors in an individual case, and strange to say the number does not increase the danger, for when a large number exists they are small. The single one being most mischievous. They grow slowly unless some complication arises, and stop at menopause, growing smaller, as a rule, thereafter.

The negress is more liable to these tumors than white women.

There is a close connecting link between these and sarcomatous and other malignant tumors which grow in the same locations. Any tumor which grows rapidly should be looked upon with suspicion. Cancer is the most fatal of all. Of this we may find any form save the scirrhus in the uterus.

The treatment must largely be peculiar to the individual case in hand, as each presents conditions essentially its own.

First and most important, is to correct the abnormalities in the most rational and conservative manner the case demands, whether it be by medicine systemically or locally, or by instrumental or surgical assistance.

To relieve suffering should be our first effort. Restore abnormalities to normalities, as best suits the individual case.

To express myself more definitely let me cite one case. Mrs. C.; married 18 years; three children; after allowing her troubles to grow constantly worse for fifteen years, presented on examination a



marked retroflexion, the ulcerated of pointing backward as far as the subinvolted condition would permit, producing a closed magnet shape of the organ; strong general adhesions; ovaries three times the natural size; the tubes greatly enlarged, indurated and tortuous, and general inflammation, cellular and peritoneal as well.

The slightest touch to the excoriated vagina was unbearable, to say nothing of the pain produced to the other inflamed parts, by gentle pressure, externally and internally. Constipation amounting almost to impaction, was of long standing. In short, every function of the body was disordered to an alarming degree. Seemingly a laparotomy was inevitable, but knowing their aversion to anything surgical I was forced to try other methods.

I used hot fomentations; hot vaginal and rectal injections; opiates and other systemics; local applications in the uterus; electricity; elevating the fundus and retaining the position as far as gained by cotton tampons medicated, and as rapidly as possible as treatment progressed, breaking down the adhesions by instrumental and digital pressure. Though an early and continued improvement was manifest, many weeks elapsed before the patient could leave her bed. Soon after doing so, however, some indiscretion on her part in the way of work, brought on a serious relapse, from which, as would be expected, she improved more slowly than at first. Now, after eight months, she is around the house attending to household duties; riding out in suitable weather; suffering no pain; the ovaries subsided to normal size; no adhesions remaining; constipation relieved; appetite good; skin clear; is rapidly gaining flesh and the uterus is normal in position and size.

Ordinarily a laparotomy is to be urgently advised for the more speedy relief of cases of similar severity, and for the removal of abnormalities. Yet, as we know, nature can and does accomplish wonders, and we do well to imitate and assist nature as far as possible.

In the treatment of uterine displacements I *never* use a pessary, save in prolapsed or complicated cases, and *never* did.

In cases free from leucorrhœa or nearly so after improvement by treatment, instead of absorbent cotton I use antiseptic

wool for tampons. This can be worn with as much comfort to the patient as cotton, and much longer—from three to five days or even more.

I almost always use electricity in any form of displacement, for more reasons than one; first, to shorten and strengthen the weakened and unnaturally lengthened ligaments and cords; second to assist, as it does, the stimulation to a healthier action, of natural tissues, and hastening the absorption of unhealthy or diseased parts.

Suturing for the retention of the uterus in overcoming flexions I call mistreatment, for certainly we gain our best ends by imitating nature. Naturally there are no adhesions, and, save in rare cases, producing this condition is a result to be avoided.

I briefly summarize the *mistreatments*: Of constipation is to continually dose the patient with cathartics without the removal of mechanical pressure or other obstructions.

Of incontinence in neglecting to relieve pressure and irritation and strengthen the muscular portion of the bladder, sphincter and urethra.

Of cystitis in neglecting to use hot fomentations, counter irritants, irrigation with hot boracic acid solutions, and diuretics, of which *Apis mellifica* is the chief.

Of vaginitis in neglecting hot water injections and soothing and astringent applications.

Of reflex troubles in treating symptoms instead of eradicating the disease.

Of dysmenorrhœa in relying on opiates, teas, hot slings, "goose grease and molasses."

Of leucorrhœa by using suppositories and vaginal capsules and other devices of doubtful origin and efficacy, leaving the uterus, the seat of the difficulty, unnoticed and untouched.

Of cellulitis and other inflammations of the pelvic organs in doing without counter irritants, hot fomentations, alteratives and intrauterine and vaginal applications.

Of lacerations, occlusions, stenoses, elongated cervix, cystic fibroid, and other tumors, abscesses, hæmatocele, etc., in tinkering to avoid an operation.

Of granulations in not curetting.

Of extra-uterine pregnancy in failing

to cause destruction by electricity and the use of ergot in the early stage, or to do laparotomy at the earliest discovery at any later stage.

Of suppressed menses, acquired consumption, hysteria, vertigo, melancholia, nervousness. *Anæmia leucorrhœmia*, headache of a character commonly described by patients as a "hot sensation on top of the head" or a "drawing pain in the back of the head," in treating the symptom without referring to the female organs as the seat of the disease.

Of menorrhœa and menorrhagia in doing without ergot in some form, and in hemorrhagics, without astringents locally,—

tampons, cold applications, recumbent position and rest.

Of inverted uterus and pregnancy by mistaking them for tumors, hæmatocele, cystocele, etc., and treating or operating accordingly.

Of miscarriage, without removal of every portion of the foetal tissues, membranes, etc.—in all cases where an abortion is inevitable, and without proper local after treatment.

Of malignant tumors, vicarious menstruation, retro-latero or ligamentous hæmatocele in neglecting palliative treatment or an operation for prolonging life, and giving a very unfavorable prognosis.

### ERRORS THAT MAY ARISE IN MEASURING THE LENGTH OF THE LOWER LIMBS.\*

J. S. WIGHT, M. D.†

So long as surgeons consider it important to overcome the shortening of the lower limb after fracture of the femur, it will also be important to remove the sources of error in the determination of the amount of this shortening.

What are the sources of error in measuring the length of the lower limb? A brief statement of these points is not out of place, since there is a difference of opinion in regard to them, and since there is thought by some surgeons to be important to make a lower limb as long as it was before its femur was broken. The facts relate to the comparative lengths of the lower limbs, as determined by measurement.

Now what are the requirements of a true and faithful measurement? It must be made by a reliable tape-line; one that will not stretch by pulling on it. It must be from symmetrical points of bone,—one on each side, corresponding to the one on the other side. It must be made with the lower limbs parallel and meeting the transverse axis of the pelvis at the same angle. It must be made with the lower

limbs in the same degree of flexion. Finally, it must be made without prejudice, for the simple purpose of establishing the truth.

The usual point of measurement above is the superior anterior process of the ilium. I sometimes measure from the top of the trochanter major. The points below are the lower ends of the internal and the external malleoli. Other points may be used, but these will answer.

The following errors may arise from the attitude of the lower limb: Abduction of the lower limb shortens its measurement. Adduction of the lower limb lengthens its measurement. Hence, an error of measurement will arise, when one lower limb is adducted, and the other is abducted. Then let the lower limb whose femur is broken be adducted, and the other abducted, and the real shortening will not be detected. In a case of this kind there would be a scientific error. Flexion of the lower limb shortens its measurement. Extension of the lower limb lengthens its measurement. Hence, let the lower limb in which the femur has been broken, be extended and let the other limb be flexed, and the actual shortening will not be detected. Now let one lower limb be abducted and flexed, and let the other be adducted and ex-

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tended, and the error in the measurement will be greater still.

Tilting the pelvis, as any one may see, acts like adduction and abduction on the comparative measurements of the lower limbs. Tilt one side of the pelvis downward, and the lower limb on that side is relatively abducted, and the one on the other side is relatively adducted. Hence, tilting the pelvis may cause an error to arise in the comparative measurement and lengths of the lower limbs.

The normal a-symmetry of the lower limbs is another source of error in their measurement: If the longer limb has its femur broken, it may be easy enough to make it of the same length as the other limb; but if the shorter limb has its femur broken, it may be impossible to make the limb as long as the other.

There is still another source of error possible in measuring the length of the lower limbs. It arises in this way: A traction weight is applied to the lower part of the limb, in order to overcome the overlapping of the fragments; or the surgeon takes hold of the leg and foot and pulls downward for the same purpose. The measurement is made during the time of this traction, or at the time of this pull, and is perhaps put down as a clinical fact. The traction, or the pull, is applied until the injured limb becomes as long as the other.

In my clinical lectures, when at the bedside of the patient with a broken femur, I have often demonstrated how a limb could be elongated by traction in the manner mentioned. I had attributed the effects to the fact that the lower fragment had been brought downward into a better reduction. A record was made of the measurement at the time of the traction or the pull. Also, a measurement was made and recorded before any attempt had been instituted for the purpose of reduction of the fragments. After union of the fragments had taken place, and the patient had got up and gone about, another measurement was made and recorded. These measurements varied: The shortest measurement was the one made before the reduction of the fragments; the next measurement, the one depending on the traction or pull, was the longest; and the one made after the treatment was complete and the patient had been divested of apparatus, as we may

well believe, was intermediate in length between the other two measurements.

In time the full significance of these facts came to my mind: that the lower limb can be elongated by means of traction or pull. In order to test this conclusion in a proper and trustworthy manner, I resorted to experiment. I obtained a dynamometer to measure the traction applied in pounds, and used it to pull upon the normal lower limb. The pull to be applied in each case was fixed at thirty pounds. The limb was measured both before and after the pull, and the length in inches was noted together with the age and occupation in each case.

THE MEASUREMENT OF TWENTY NORMAL  
LOWER LIMBS, BEFORE AND AFTER  
THE APPLICATION OF A TRAC-  
TION OF THIRTY POUNDS.

	Occupation	Age	Limb	Before pull	After-pull
1	Stable-boy	16	Left.	33.2-8 in.	33.6-8 in.
2	Stone-cutter	23	Left.	34.2-8 in.	34.6-8 in.
3	Laborer	35	Right.	33.6-8 in.	34.2-8 in.
4	Sailor	27	Right.	33.6-8 in.	34.1-8 in.
5	Hack-driver	50	Left.	29.3-8 in.	29.5-8 in.
6	Farmer	30	Right.	33.3-8 in.	33.5-8 in.
7	Laborer	52	Right.	33.2-8 in.	34 in.
8	Carpenter	35	Right.	31.4-8 in.	32 in.
9	Photog'pher	24	Left.	34.4-8 in.	35 in.
10	Laborer	39	Left.	35 in.	35.3-8 in.
11	Laborer	34	Right.	32.4-8 in.	32.6-8 in.
12	Sailor	40	Left.	34.6-8 in.	34.7-8 in.
13	Bartender	21	Right.	33.6-8 in.	34.3-8 in.
14	Seaman	30	Right.	34.4-8 in.	35 in.
15	Laborer	25	Right.	33.6-9 in.	34.1-8 in.
16	Laborer	19	Left.	31.4-8 in.	32 in.
17	Seaman	50	Left.	34 in.	34.3-8 in.
18	Seaman	44	Left.	34 in.	34.4-8 in.
19	Engineer	38	Right.	33.4-8 in.	33.6-8 in.
20	Seaman	20	Right.	35.2-8 in.	35.4-8 in.

The twenty cases above tabulated give the following conclusions: The greatest lengthening of the lower limb after a traction of thirty pounds was six-eighths of an inch; and the average lengthening was  $\frac{1}{2}$  of an inch, or nearly one-half of an inch.

Other cases were measured, showing lengthening of the lower limb under traction, but the above twenty cases were all that I recorded. I am reasonably certain that a large number of cases will show a similar result. In fact, I have often verified this lengthening in cases of fracture of the femur. When the fragments have united, apply the tape-line, with the lower limb under traction, and then stop the traction, with the tape-line still applied, and it will be more or less slackened.



The traction was applied only during the time it took to make the second measurement; what effect it would have if it were kept up for three or four weeks I know not, but am convinced that it would be greater than has been noted above.

A traction of ten or fifteen pounds, kept on for four or five weeks, would doubtless have as great an effect as thirty pounds kept up for one minute. In fact, ten pounds can do more work in four weeks than thirty pounds can in one day: hence, we have not obtained the maximum effect in the lengthening of the lower limb by means of traction.

The general conclusion then would be that the traction-weight used in the treatment of a fracture of the femur will lengthen the lower limb, irrespective of the removal of the longitudinal displacement. If this is so, since bones cannot stretch, the change must take place in the joints: the ankle-joint must be excluded: the hip-joint may be effected to some extent; but the chief cause must be found in the knee-joint: that is, the ligaments of the knee-joint stretch under the traction we put upon the lower limb.

There is a modifying circumstance which accompanies the traction. Traction tilts the pelvis downward on the side where it

is made, and that tends to shorten the measurement of the lower limb, as we have seen;—hence, the lengthening may be even greater than we have made it.

The opinion we are obliged to form on this subject is: That a measurement of the lower limb at the time of the action of the traction-weight is incorrect, incompetent, misleading and irrelevant, as a piece of surgical evidence. To make a measurement reliable and admissible, it must be made after the removal of the traction-weight. Hence, it must happen that all statistics that have been founded upon such measurements are without any practical value whatever. This must be so since the traction-weight vitiates the correctness of the measurements.

Here we may mention one other source of error in the measurement of the lower limb, under any circumstances: It is found in the personal equation. Does the surgeon desire the full expression of the facts in the case? Then let him see to it that he removes every source of admitting error in his professional work. Does the surgeon desire to make it appear that he can get better results than those which others can obtain? Then the best thing for him to do is to lay aside all ambition except that which leads him forward in the search for the truth.

### STATISTICS CONCERNING EYE DISEASES IN THE ROCKY MOUNTAIN REGION.\*

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I have often been asked by patients and physicians if I did not consider Colorado climate particularly trying to the eyes. The impression is prevalent that those forms of eye disease which are induced or aggravated by bright light, heat and dust, are more commonly met with here than in the Eastern States.

In conversation with physicians long resident in the Rocky Mountain Region, I have been struck with the almost universal prevalence of the opinion that conjunctivitis, trachoma and ulcerations of the

cornea are marked peculiarities of this region. The traveling public are so thoroughly impressed with this idea that I have often met among eastern visitors the expressed fear of contracting eye disease during a short residence in our climate. The ubiquitous dark glasses are worn by hosts of these tourists as a defense against maladies which are supposed to lurk in our dust and sunshine. I have even heard it asserted that the bountiful supply of oculists in our Western country is an evidence of an effort of nature to supply an antidote for disease. If I am not mistaken the records of this Society show that the experience of oculists is in accord with the sentiments I have expressed.

\* Read before the Colorado State Medical Society, 1893.

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For several years I have been skeptical of the truth of this generally received belief, although during my first two or three years residence in Denver I accepted as a fact that which everyone seemed to believe. So far as I am aware, there have been no carefully compiled statistics to guide us in drawing scientific conclusions as to the relative frequency of various eye diseases, East and West. I am fully aware of the errors which may creep into comparisons such as I shall here make. I know that the number of cases on which I base estimates is small; I admit that methods of recording cases differ,—for example, one observer may report 1,000 cases from 300 or 400 patients, while another would allow but one record for each patient, still I believe that a comparison can fairly be made after eliminating, so far as possible, all causes of error and dissimilarity in records.

A comparison of diseases other than those I mention would be interesting, but the chief object of this paper is to discover if the Rocky Mountain climate predisposes to certain diseases of the eye. As an evidence of the youthfulness of our population I have also called attention to the number of cases of senile cataract East and West.

For the purpose of comparison I have placed in the table figures relating to conjunctivitis, acute and chronic, trachoma, lachrymal troubles, iritis, ulcers of the cornea, and senile cataract. From the various reports at hand, I have selected as fairly representative of different sections of the country, the following: Presbyterian Eye and Ear Hospital, Baltimore; Ophthalmic and Aural Institute, New York, for years 1887, '88 '89; St. Mary's Free Eye and Ear Infirmary, Detroit; Illinois Charitable Eye and Ear Infirmary, Chicago, 1890; Wills Eye Hospital, Philadelphia, 1890; Denver cases during the years 1892 and 1893.

If reports from further South had been used, elements such as race characteristics would have required attention.

I refer to three consecutive reports from New York Hospital to illustrate the fact that the ratio of diseases in any given institution is quite constant.

My own report is made from the record of private patients during 13 months ending June 1st, 1893, and comprises 984 cases.

The results would have been almost identical had I used clinical cases, but my private record was more reliable and therefore preferred.

	Acute Conjunctivitis	Chronic Conjunctivitis	Trachoma	Lachrymal	Iritis	Ulcer Cornea	Senile Cataract
Presb. E. & E. Inf. Balt...	20.8	20.8	.9	3.7	2.6	20.1	5.5
O. and A. Inst. N. Y. 1887.	6.1	13.2	4.3	2.3	1.4	3.1	3.5
" " " 1888.	9.2	13.2	3.9	2.4	1.5	2.9	2.3
" " " 1889.	4.7	16.1	5.4	2.3	1.3	2.9	1.5
St. Mary's Inf. Detroit...	5.9	2.7	5.6	2.3	2.3	2.4	1.2
Ill. Char. E. & E. hosp. '90.	5.8	5.4	5.9	2.1	3.2	4.2	2.7
Wills Eye Hosp. Phila. '90.	1.4	1.9	1.7	2.7	2.2	2.0	5
Denver, 1892 and 1893.....	5.8	2.5	2.9	3.6	3.9	3.1	1.1

From an examination of the table it will be seen that Colorado is peculiar fortunate in the matter of conjunctivitis, as only one report gives a lower record in the acute form and none in the chronic. In the reports from Baltimore and Philadelphia no division is made on the basis of acute and chronic, but the total of the two varieties exceeds that of Denver. I wish to call particular attention to the fact that we have this year in Colorado, suffered from an epidemic of acute conjunctivitis. More than four-fifths of the cases in my report were met with after June 1st, of the present year. The epidemic became so prevalent in the city schools that the authorities in one or two instances asked for an examination of the pupils and took measures to limit the spread of the disease. Notwithstanding the presence of this epidemic the ratio of conjunctivitis for Colorado is exceedingly low.

In trachoma, Colorado surpasses two of the reports and stands below the rest.

Inflammation of the lachrymal tract seems to be very prevalent in this locality, if the table is to be taken as a guide. I will add that the result conforms to my experience during seven years residence in Denver.

In diseases of the iris also, Colorado shows an unpleasant preeminence, but it will hardly be urged that this disease is much influenced by climate.

In ulceration of the cornea there seems to be a very constant ratio for all of the reports.

Senile cataract does not appear to be common here, and I believe for the same reason that we do not see many cases of glaucoma, namely, the youthfulness of the population. The Western population is notably young. The pioneer's of the

early '60's are not yet old men, while the great mass of our citizens, who have come West during the last 15 years, have been under 35 years of age.

During the year I have seen but two cases of true snow blindness, and in common with other observers believe this disease to be rare.

It is difficult to explain these figures, but I believe that fuller notes and larger collections of cases will confirm the conclusions drawn from this small table. All know how irritating to the conjunctiva are our numerous sandstones, and all have experienced the unpleasant effect of riding over our plains or mountains in the glare of an unclouded sky. Personal experience would lead most people to think the common impression right and my tables

wrong, but I believe that careful observation will confirm my conclusions.

I offer the following as a possible explanation. In this dry climate and at this altitude, the conjunctiva tends more rapidly to recovery than it does in the East where moist nasal catarrh is so common. I freely concede that the causes for conjunctivitis are more abundant here than in the East. It is possible that hyperæmia is more prevalent, although it would be difficult to establish that fact. What I do maintain is that of the cases of conjunctivitis and trachoma requiring treatment we do not see so large a ratio here as in the East; while in lachrymal troubles and ulcerations of the cornea we have to deal with only an average number of cases.

## SOCIETY REPORTS.

### AMERICAN MEDICAL ASSOCIATION, SECTION OF NEUROLOGY AND MEDICAL JURISPRUDENCE.

#### [ABSTRACT OF PAPERS.]

ADDRESS BY THE CHAIRMAN, Dr. C. K. Mills, of Philadelphia.

#### THE INFLUENCE OF SPECIAL SOCIETIES AND SECTION WORK ON THE DEVELOPMENT OF NEUROLOGY IN AMERICA.

The writer suggested the advisability of limiting the time for discussion to five minutes, except in the case of the reader of the paper who should close the discussion. He referred to the excellent work done by the Philadelphia Neurological Society, stating that more than one-half of the work done by that society would not have seen the light had not the society been in existence, giving this as an example of the advantage of such societies. The American Medical Society can best advance by allotting special work to sections. The appointment of committees to do special work has been of great value. But too many isolated cases have been reported and papers have not always been well prepared in the work of these societies. A great advantage of small societies is that they secure definiteness of aim.

#### ON THE WEIGHT OF THE BRAIN,

by Dr. Henry H. Donaldson, Chicago, Ill.

It is important to determine how far we may draw inferences from the weight of the brain. In a large number of examinations it has been shown that the weight of the brain in the male is greater than in the female; that the weight of the brain in insanity is not unusual except in cases of wasting disease; that the brain wastes slightly in old age. These observations, however, are taken from the unfortunate classes. It is shown that the brain increases rapidly in size from birth up to seven or eight years and more slowly up to fifteen or twenty. Then for the next few years there usually occurs a slight falling off in weight, which gives place to an increase up to 35 or 40, the weight remaining constant for 10 or 15 years, then decreasing. It must be remembered, however, that these facts are gained from an examination of the dead and not the living subjects, therefore the curve which represents the course of brain growth cannot be taken as representing growth of the individual brain. If we could study the



avored classes we might find different results. Brain growth is especially rapid during the first year. Cells and their prolongations are the structural elements of the nervous system. All nerve cells are formed before birth and the brain increases after birth by the enlargement of the elements already present, and not by the formation of new elements. In the human brain the white substance is but little less than the gray, but we do not know what the physiological interpretation of the medullary substance is. The granules in the cortex and other localities are undeveloped nerve cells which by growth are transformed into the characteristic ganglion cells. The conditions of growth must be delicate, so two individuals starting with nerve cells of the same weight at birth, arrive at maturity with very different brain weight. The size and number of the elements and relative abundance of the medullary substance must be the next step in the interpretation. Race, age, sex, stature, bodily weight, mental condition, individual development, cause of death, autopsy are all factors to be considered.

DYSPEPSIA AS A NERVOUS DISEASE, OR  
INDIGESTION IN ITS NERVOUS ASPECT  
AND RELATIONS,

by Dr. C. H. Hughes, of St. Louis.

The purpose of Dr. Hughes' is to place on record the fact which is now quite generally recognized, that dyspepsia, as we generally encounter it, is more frequently a secondary disease than a primary one, secondary as to degenerative or exhaustive changes in the central nervous system; and the illustrations in the paper are drawn from the class of people who furnish us our patients as dyspeptics, and from some portions of the rest of the animal kingdom. It is a well-known fact that hogs never have dyspepsia; that when you come among trained animals, however, you first find the elements of dyspepsia, owing to the animals being subjected to a certain extent, to those habits of life and environment which bring about the neurotrophic condition from which dyspepsia arises as a secondary disease.

NOTES ON THE TREATMENT OF EXOPHTHALMIC GOITRE.

by Dr. J. Madison Taylor, of Philadelphia, Pa.

Dr. Taylor takes up the subject of exophthalmic goitre as understood at the present time, reviews its relationship to other vascular disturbances, associated with enlargement of the thyroid, as myxodema, cretinism and acromegalia. He does not see that at present the thyroid physiology warrants any large measure of hope that we shall treat this malady through thyroid juices, as in the case of the other disorders mentioned, and yet promises to explore this field later. He confines himself chiefly to the analysis of a number of cases long under his care, some of them for many years, and most of whom are well, summarizing the means through which these were improved. The treatment of maladies which demand but little constant supervision and yet require prolonged watchfulness, is more or less difficult and unsatisfactory because such cases wander away, will not persist in treatment, and from their nature of unhopefulness, have a tendency to fall into the hands of other medical men and have their treatment changed, etc., make it difficult to pursue any consistent plan, even with those inclined to be faithful. He takes the ground that this disorder is capable of much more hopeful treatment than is generally thought; that most cases are enormously improved, if rightly handled; that many may get well.

The question of treatment is chiefly considered from the standpoint of his own experience. This consists in:

1. Regulated rest, with carefully graduated activities as time and circumstances warrant, systematic measures directed to the upbuilding of the general health, careful attention to nutrition, recognizing the trophic elements in the disorder.

2. Careful attention to vascular conditions, which are most noticeably at fault and which demand the most constant treatment. This consists of varying measures, regulating vaso-motor activities, as well as loss of nervous force through the easily disturbed nervous balance. This is done through attention to the skin from the surface by means of certain remedies which seem to exert a control over the constant tendency to vaso-motor neuroses, both superficial and deep.

3. To search out constitutional defects and remedy these, eliminate accidental poisons, either diathetic or temporary, eliminate toxines, as of internal sewage

poisoning which has a very direct bearing.

4. The regulation of the nervous or emotional balance by careful attention to the habits and environment of the individual, carefully regulating, so far as possible, the habitual emotional strains and the possible ones, making much of moral teachings to those whose will power and mental equilibrium are gravely at fault constitutionally, and as inevitable entanglements due to months and years of suffering and susceptibilities.

5. A careful consideration of such measures as are regarded as specific, as electricity, of which much has been made by many writers, but whose value consists chiefly in the system and encouragement which is thereby exerted over the disordered emotional states.

Finally, a summary of the cases under observation when the original paper was written in 1888, and the report of a number of others seen since then, and a careful review of the symptomatology, and recent means of treatment.

#### SUGGESTIONS ON THE TREATMENT OF LOCOMOTOR ATAXIA,

by Dr. Daniel R. Brower, of Chicago.

Some cases may be cured and some may have the rate of progression considerably impeded. If the disease is recognized in the preataxic stage, rest for three months should be the foundation of the treatment. Iodide of potassium in large doses, fluid extract of ergot in full doses, and galvanism are of value. Hypodermic injections of morphia are most valuable to relieve paroxysms of pain. Carefully guard the digestive organs; alcoholic stimulants and sexual intercourse should be prohibited. When the second stage or the stage of incoördination has been reached, when the disease usually progresses rapidly, ergot will sometimes prevent the progression. Suspension is of service, continued as long as possible, five to fifteen minutes. In this stage the injection of chloride of gold and sodium is advisable, at the same time employing phosphite of zinc and arseniate of sodium, also galvanism; no benefit from internal administration of any preparation of silver. Cold bathing is of value; hot baths contra-indicated. The pains of the second stage are met by morphia; sometimes phenacetine, antipyrine, etc., answer the purpose better. Patients can be taught

to regain some degree of coördination by the practice of standing with feet close together, with eyes closed. If the patient stands in the bath tub and has cold water poured on his spine, he will more speedily regain this coördinating control. Bladder needs attention to avoid possible cystitis. Use hypodermic injections of morphia to stop gastric crises. In the third stage use tonics; galvanism to the spine and faradism to the surface; injections of cerebrine and other animal products have thus far in the writer's experience proved unfavorable, yet may admit further trial.

#### DISCUSSION.

Dr. T. D. Crothers recommended Turkish baths and said they sometimes effected an apparent cure.

Dr. C. H. Hughes, of St. Louis, suggested that the diagnosis was incorrect in cases of apparent recovery, and that the correct diagnosis in such cases should be multo-neuritis. He considered recumbent flexion superior to extension.

Dr. F. R. Fry, of St. Louis, stated that a great deal of trouble arose from the extravagant claims of quacks to cure this disorder. There is the greatest discrepancy in recommendations of practitioners. We have all of us seen cases of genuine tabes do well, but as there are many cases of apparent or temporary improvement under various methods of therapy, we should be careful about formulating conclusions as to the proper treatment.

Dr. Brower, concluding the discussion, said that he was satisfied that some cases of locomotor ataxia, if the treatment is commenced in the preataxic stage and is constant and proper, can be greatly improved, and perhaps some recoveries may take place.

#### HEMIPARAPLEGIA, REPORT OF A CASE COMPLETELY RECOVERED AFTER ONE YEAR'S DURATION.

by Dr. L. Harrison Mettler, of Chicago.

The writer concludes that the correct explanation of the case indicates that we may have hemiparaplegia from a lesion in the lower part of the cord in which the anæsthesia and paralysis appear upon the same side of the body, but that further investigations are needed on this point, though the writer feels sure that the text-books are somewhat too dogmatic in asserting that in all cases hemiparaplegia

is a paralysis of one-half of the lower part of the body with anesthesia of the opposite half.

**AURAL VERTIGO, MENIERE'S DISEASE,**  
by Dr. L. Harrison Mettler, of Chicago.

Medical literature abounds in cases wherein a sudden attack of vertigo associated with loss of hearing was diagnosed as hemorrhage into the labyrinth, without further investigation into the correctness of the inference, but vertigo as a mental phenomena seems to be of far too complicated a character to presuppose so simple an origin. If the views of Spitka and Starr are true in regard to the sensory paths in the medulla, they bear strongly in favor of this sensory motor theory of vertigo. Every indication points to the fact that we must look for the center of equilibration not in one particular part of the brain, but in the harmonious action of the various sensory and motor centers one upon the other. Menière himself seems to have believed that only the semicircular canals are affected in true Menière's disease. He, however, declared the canals to be the cause of cerebral symptoms on the strength of a single observation, and even that observation was not conclusive as to that particular case. Much confusion has arisen in regard to this affection, disease in any part of the internal ear and even of the middle ear, has been termed Menière's disease, though Menière himself restricts it to the semicircular canals. Gower strongly supports the labyrinthine origin of vertigo, but his proofs are very inadequate; though we admit the implication of the semicircular canal in aural vertigo, it still remains a difficult matter to explain the vertiginous symptoms and loss of hearing upon his hypothesis in all cases. The semicircular canals in the sharks have been removed without obtaining any disturbance of movement. There is no regular correspondence between the amount of deafness and the intensity of the vertigo with total loss of hearing in Menière's disease. All known methods of diagnosis prove that the nerve itself and not merely the internal ear is affected. Physiological experiment shows that simple pressure does not cause total loss of hearing, when no injury is done to the cochlea, and no case has ever been reported in which the cochlea was primarily affected with consequent

involvement of the canals and vertigo. Hence in Menière's disease the writer concludes that the lesion must concern the whole labyrinth or lie entirely outside of it. There is little doubt about the central nature of the disease in many of its aspects. The sense of irritation may sometimes be in the semicircular canals just as sometimes it may be in the eye or in the stomach, but the immediate cause of the vertigo cannot be there, and in view of the few pathological data at hand, we are not justified in assigning all cases of vertigo to an unknown and undemonstrable lesion of the internal ear.

**A METHOD OF LOCALIZING POINTS IN THE**  
**HEMISPHERICAL GANGLIA,**

by Dr. William Fuller, of Grand Rapids, Michigan.

The writer stated that he had hardened a brain with great care, separated the lateral halves, and each half was carefully sliced by a gauge, so that the slices were three-sixteenths of an inch thick, perpendicular to a line in the long axis of the brain. By this means he had obtained photographs of 74 vertical transverse cuts of the brain. Dr. Palmer presented a model of the brain made in the manner indicated, to show the anatomy of the brain.

Dr. Palmer stated that in 1877 he made a craniectomy for the relief of idiocy, an account of which was published in the *Canadian Medical and Surgical Journal* of 1878; he stated that he was the first to perform that operation. The operation was ridiculed in both America and Europe at the time, but has since been claimed as originating with European surgeons.

**A CASE OF SUBCORTICAL CYST OF THE**  
**LOWER PART OF THE ASCENDING**  
**PARIETAL CONVOLUTION; OPERA-**  
**TION; RECOVERY.**

by Dr. Theodore Diller, of Pittsburg, Pa. and Dr. J. J. Buchanan.

A thorough history of the case is given by Dr. Diller. Nearly all the important symptoms of intracranial growth were present. Headache, vomiting, vertigo, convulsions and paresis. From the history of the case it was evident that a lesion was located in the left Rolandic region, involving principally the hand center. The absence of sensory symptoms seems to indicate that the lesion was



situated anterior to the Rolandic fissure, and from the fact that paresis preceded convulsions, the lesion seemed probably a subcortical one. Thus the means were given for determining the proper position of the opening of the skull. Operation was done by Dr. Buchanan. The relative method of Thane was employed to locate the fissure. Dr. Buchanan employed a thin sheet of aluminum, cut in the form of a segment of a circle, having an angle of 67 degrees and a radius of three and three-eighth inches and molded to fit the average skull, when its straight sides are applied respectively to the median line and to the part of the scalp corresponding to the fissure of Rolando. While the result of the operation fell considerably short of an entire cure and is in a measure disappointing, yet it was followed by distinct and unmistakable benefit to the patient. It is too early to tell what the ultimate result will be. The case offered strong evidence in support of the view that the ascending frontal convolution is exclusively related to motor function. The cortical representation of the forearm and hand are located in the ascending frontal convolution; the cortical subdivisions of the arm area are related to each other as follows in the ascending convolution, that for the shoulder highest, elbow, wrist, fingers below in the order named; center for the thumb is located in the ascending parietal convolution, closely adjacent to posterior bed, and a little below that for the fingers. The theory that a subcortical lesion is apt to produce paresis before convulsions finds confirmation in this case, and the general principles of localization as enunciated by Horsley, Seguin, Mills and others are well exemplified in this case.

#### SURGERY IN THE INSANE

by Dr. C. B. Burr, Pontiac, Michigan.

This paper contains a collection of cases illustrating phases of surgery which come under the eye of the hospital alienist, including the gynecological operations; also two cases of melancholia in each of which the operation of trephining had been done, showing the futility of trephining. A case is given indicating some of the great difficulties encountered in the care of old demented. Suicidal attempts are far from infrequent. Case illustrating the curative effect of operations *per se*, well known to

alienists and which of late surgeons are beginning to recognize. Hernia and perityphlitis are relatively frequent in the insane, but often pass unnoticed.

In the discussion of this paper, Dr. H. N. Moyer held that the element of consent was extremely important, especially where surgery of a very radical character and which is not as yet well grounded—as for instance the removal of tubes and ovaries where there is no apparent local disease—for the benefit upon the general nervous system, is employed. He referred to the fact that shock is comparatively slight in operations upon insane persons notwithstanding their general low nutrition.

Dr. James G. Kiernan, of Chicago, held that the position of superintendent of an insane asylum was a quasi legal one and that he is the guardian of the patient, and under such circumstances has the right to give consent for the patient for an operation, and especially is that true in an emergency case; the removal of healthy tubes and ovaries is not likely to produce a permanent improvement. The counter irritation may produce a temporary improvement, but such operations are not justifiable. He referred to the improper operation of a so-called great apostle of the American operation or official surgery, and its frequent evil results.

Dr. G. H. Rohe, of Catonsville, Md., held that a marked improvement did follow such operations and that in many cases they were justifiable. He believed the opinion given by a legal member of the Pennsylvania board of lunacy was not worth the paper upon which it was written, that is regarding the question of consent, which is the most important point touched upon in the discussion; in intervals of lucidity insane patients could properly give consent; but an insane person in the eyes of the law is not an individual and cannot give consent, but the speaker believed that a legal guardian appointed by the court is a guardian of the individual's person; he thought the liability of the operator to a suit for malpractice was sufficient protection.

Dr. Moyer thought that the question was whether this operation of removing the ovaries and tubes was justifiable at the present time in a given case, and what the general opinion of the profession was as to how many will be cured by this procedure.

## THERAPEUTICAL USE OF STATIC ELECTRICITY.

by Dr. G. F. Lydston, of Chicago, Ill.

The writer held that the use of static electricity in medicine has been too closely restricted to the more advanced neurologists. He has found it a very reliable agent in his office practice and valuable especially in neurasthenia, particularly in the forms associated with brain fog and sexual hypochondriasis. The application of the static current to the spine has seemed to have a marked stimulating effect upon the genito-spinal centers. Some eleven years ago the writer suffered from profound neurasthenia which developed atrophic changes in the muscles of the hands. A cure was effected by static electricity. He has used the static current in a number of cases with a greater or less degree of success. In some instances it seemed to have no effect whatever. He has, however, seen no cases in which it seemed to be injurious, although his experience would lead him to believe that in some delicate and neurotic patients the agent should be used with a certain degree of circumspection.

Dr. L. C. Gray, of New York, said that too much had been expected from the use of static electricity at first, that it had proved disappointing, and there was a revulsion of feeling against it and it had been largely discontinued, but that very probably it was coming into use again. The improved machines of the present day are a great advantage; results have been surprising in certain cases; especially has it proven useful in cases of muscular atrophy.

Dr. Daniel R. Brower, of Chicago, called attention to the usefulness of this current in cases of chorea, and described his method of application, by placing the patient on an insulated stool and applying the current for from ten to fifteen minutes.

Dr. Lydston stated that the art did not seem to be exceedingly well defined at present; the question of the element of hypnotic suggestion should not be given too prominent a part; the effect of a current in chronic inflammatory troubles with the joints has been excellent; the current has been applied heretofore empirically, and there has been no great attempt made at the classification of the various indications; he does not know where to look

himself for a clear presentation of the indications and methods of application of static electricity; with regard to his own case he was firmly convinced that he was cured through the medium of static electricity; he does not believe, however, that he had true progressive muscular atrophy.

## SODIUM ARSENIATE IN THE NEUROSES,

by Dr. Harold M. Moyer, of Chicago.

Arsenic in nervous troubles ranks very high as a therapeutic agent. The objection to the use of Fowler's solution, that is the arsenite of potassium, hypodermically is that it is exceedingly irritating. Arsenic when exhibited beneath the skin has a far less toxic effect than when administered by the mouth. The fact of the arseniate of potassium giving rise to no local irritation allows the use of a much larger dose than of the arsenite. He has exhibited an arsenic equivalent in the arseniate of sodium, of 40 to 60 minims of Fowler's solution at a single dose, and it is a common practice to give an equivalent dose of 80 minims of Fowler's solution as the initial injection. It is necessary in order to prepare accurate solutions for hypodermatic use, to subject the salt to a temperature of about 300 degrees which drives off the water of crystallization. The method in short is worthy of more extended trial.

## INSANITY AMONG CONVICTS

by Dr. M. V. Ball, of Philadelphia.

The paper presented illustrates some of the types of insanity found among persons convicted of crime. When we recognize that "every society deserves the criminals it has" we will endeavor to correct the evils that in a large part cause crime, and treat our malefactors not with a spirit of vengeance, not with a visitation of justice, not as sinners, but merely as obstructionists whom society must place under restraint or remove to a place where they can be of service instead of hindrance; then only will the penal question reach solution. Our present mode of justice is childish. What would be thought of the suggestion that a chronic maniac should be sent to an insane asylum for one year and then released unconditionally, and then after he had killed some one, again sentence him for a definite term of one or more years? The danger to society alone should be considered and the professional

criminal placed in durance vile until cured, if that result is possible, or permanently if the danger to society is ineradicable, and wholly as a protection to society and irrespective of his sanity or insanity, his moral responsibility or irresponsibility.

WHAT SHOULD CONSTITUTE RESPONSIBILITY IN THE MEDICAL SENSE, IN INSANITY?

by Dr. Landon Carter Gray, of New York.

The object of the paper was to call the attention of the medical profession to the fact that great injustice is likely to be done to insane people by basing the view of their insanity upon the proposition that if a man is able to understand the nature, quality, and consequences of an act, he is legally responsible for such an act. The doctor most emphatically declared that the question of legal responsibility should be determined, not by laws, but by facts. Medical science demonstrates the fact that a diseased condition of the brain giving rise to mental aberration, permits of no half way ground in judging of sanity. Periods of remission cannot reasonably be called "lucid intervals," as is often done. After classifying the types of insanity which have been demarcated up to the present time as: the presence of hallucinations; the presence of delusions; the co-existence of organic disease of the brain; traumatic causation; causation from excessive use of narcotics; and the mental disturbances occurring from derangement of the organism induced by disease of non-nervous viscera, Dr. Gray called attention to the fact that in paranoia, mania and melancholia the reasoning powers and the memory are usually intact, yet the patient has undeniable hallucinations and delusions, and under the influence of those delusions and hallucinations commits acts for which he should not be held legally responsible. He cites the case of the paranoiac Dougherty, who imagined himself the beloved of Mary Anderson and that the world was conspiring to keep him from her and, in pursuance of this delusion, murdered Dr. Lloyd of the Flatbush Insane Asylum, and was planning to kill about a dozen public officers whom he believed to be in the conspiracy. Yet he declared himself sane and asserted that he knew the nature, quality, and consequence of his act.

He was probably pronounced insane because his mania was so palpable, although some doubt prevailed in the public mind as to his insanity. The doctor concludes by saying that the only safe test of the legal and testamentary responsibility of a man lies in an answer to the simple question: Is he insane? If he is, he is not legally responsible, and this question can only be properly decided by competent physicians, not by fine spun theories of lawyers. Common sense must be applied to such cases rather than metaphysical definitions of mental aberration.

DOUBLE LESION OF THE BRAIN; CEREBRAL CYST AND CEREBELLAR TUMOR.

by Dr. Edward B. Angell, of Rochester, N. Y.

The object of the presentation of this case was to indicate that it undoubtedly showed an increase in development on the right side which had had to take upon itself the left brain function, and then in addition to that, not only were the centers corresponding to the speech center of the left side hypertrophied, but the surrounding cortical structure had been increased in area and character; and it is important to consider whether benefit cannot be derived by such indirect exercise.

Dr. James G. Kiernan, of Chicago, called attention to the case of the reeducation of the speech center in an adult, the recovery being complete, but a second attack produced aphasia. The autopsy showed that there was an old apoplexy destroying the left side, and the second attack destroyed the right. Dr. Kiernan doubted whether cases of epilepsy were curable.

RECENT DEVELOPMENTS IN GUNNERY OF INTEREST TO THE MEDICAL JURISTS.

by Dr. J. N. Hall, of Denver, Colorado.

He said that newly introduced explosives are rapidly replacing black powder; he described the two most commonly used of these products, the American wood powder and the Schultze powder; the staining from wood powder is much less distinct than from black, and the staining from the Schultze powder is less marked than even the wood powder described; neither of the two powders mentioned ignited cloth or blotting paper at so great a distance as did the black powder.

Dr. Harold N. Moyer, in discussing the paper, called attention to the fact that



the length of the barrel of the weapon should always be a factor in making up tables, and stated that there was always leakage of gases in revolvers; another interesting point would be not only as to the kind of powder, but also as to the amount of fulminate in the fixed ammunition, and as to the manner in which it is put into the cartridge, whether fine grained or practically in a solid mass.

THE SECRETARY, called attention to the fact that in some instances, in the case, for instance, of a double barreled rifle, the barrels were not of the same size, and that might have a bearing in criminal matters.

#### SENSORY SYMPTOMS OF THREE SYPHILITIC CORD CASES,

by Dr. Frank R. Fry, of St. Louis, Mo.

The purpose of the minute account of these cases given was that the writer felt, in the light of Dr. Erb's recent investigations, we are warranted in making very careful clinical records of our syphilitic cord cases in order that we may formulate a symptomatology which will help to more readily differentiate these cases.

In discussing the paper, Dr. L. C. Gray, of New York, held that the views of Dr. Erb that there are always exaggerated reflexes, have not met with success, and are disproved by these very cases of Dr. Fry. The speaker held that it was better to admit that we have not as yet discovered any pathognomonic symptoms by which we can detect a disease, than to be deluded; but that there are symptoms in quite a number of intracranial cases which, if taken early, would make it possible to relieve the disease and prevent its progress; he also believed that some such symptoms can be discovered in regard to spinal syphilis, but that they have not as yet been found, and, therefore, these cases are very valuable as a disproof of some of the assertions of Dr. Erb.

Dr. Moyer called attention to the necessity of these minute investigations, that physicians have generally been too careless in making diagnoses and as too hastily classing a disease as tabes or paraplegia, etc.; he thought that the grouping of fifty or one hundred cases such as Dr. Fry has described, would do more to elucidate the matter than anything else.

#### LESION OF THE RIGHT TEMPORO-SPHENOIDAL LOBE,

by Dr. W. J. Herdman, of Ann Arbor, Mich.

The writer stated that this lobe of the brain has been spoken of as being a latent region, destruction and irritation of which produced no special and distinctive phenomena. This region of the human brain is surrounded with darkness. The paper gives a very minute history of a case, which the writer at first diagnosed as one of arterial embolus obstructing the left anterior cerebral artery. The autopsy revealed that the regional attack had been due to a hemorrhage very extensive anterior to, and at the lower extremity of the right lateral cornu. Softening followed involving the hippocampus major at its lower extremity and the anterior extremities of the superior, middle and inferior temporal convolutions. The writer believes we are justified in the assumption that as far as any symptoms observed in this case can be justly referred to the lesion in the right temporal lobe, they tend to show that its function is of the same nature for the left side of the body that Ferrier has found the left temporal lobe to be for the right, a cortex center for hearing and taste. There is necessity for a systematic and thorough examination in detail of all the sensory motor tracts in every case of central lesion, after a definite plan which should, wherever circumstances permit, be rigidly carried out.

In the discussion of this paper, Dr. Charles K. Mills referred to several similar cases which appeared to demonstrate that the left upper temporal region is most particularly developed for word sound, and the right has a minor degree of development of the same function and takes on the function of the left in part but not entirely, in case of the destruction of the former.

#### HEMIANOPOSIA AND CERTAIN SYMPTOM GROUPS IN SUB-CORTICAL LESION,

by Drs. Charles K. Mills and G. E. de Schweinitz, of Philadelphia, Pa.

This paper deals chiefly with reference to the diagnosis of the locality of the lesion. The observations of the paper were confined strictly to cerebral cases. Seguin's three cases were summarized, which he regarded as due to lesion of the

outer edge of the thalamus and of the internal capsule in its caudal parts. The first case of the paper showed right lateral hemianopsia, absence of Wernicke's symptom, dyslexia, temporary right hemiparesis, and Jacksonian epilepsy. Case two: right lateral hemianopsia, absence of Wernicke's symptom, dyslexia, right hemiparesis, partial right hemianæsthesia, partial word deafness and word blindness. Case three: right lateral hemianopsia, absence of Wernicke's symptom, temporary aphasia, dyslexia, right hemiparesis of spastic type, probable word blindness. Case four: left lateral hemianopsia, left hemiparaplegia and hemianæsthesia partial, aphasia temporary. Epilepsy, Wernicke's symptom. Case five: right lateral hemianopsia, absence of Wernicke's symptom, temporary right hemiplegia, persistent hemianæsthesia. Case six: left lateral hemianopsia, left hemiplegia. Case seven: right hemianopsia, right hemianæsthesia. Case eight: right lateral hemianopsia, absence of Wernicke's symptom, doubtful; slight right hemiparesis. Case nine: left lateral hemianopsia, absence of Wernicke's symptom at first, paresis of both legs, later right spastic crural monoparesis. Two cases were given which were probably cortical, one having a typical left lateral hemianopsia and the second right hemianopsia with absence of Wernicke's symptom.

Another case was given of right lateral hemianopsia followed a year later by left lateral hemianopsia, absence of Wernicke's symptom, macular vision retained, changes in color since, loss of sense of location.

Case also reported which would seem to teach that we may have either functional or organic disturbance of the word symbol center of the same character as that which produces hemianopsia when the half center for general vision is destroyed on one side of the brain.

#### AMERICAN INEBRIATE ASYLUMS

by Dr. Thomas D. Crothers, Hartford, Conn.

The essayist gave a history of the Binghamton establishment; managers of asylums who teach dogmatically the nature of inebriety and its only true remedies are not very far along in their scientific work, and asylums which claim large percentages of cures from certain means and remedies

are not worthy of confidence. Inebriety is the most complex neurosis of modern research. The gold cure specifics so-called, are followed by an increased number of insane among those who have used the treatment, which is something to be expected as the more powerful the narcotic used to stop the drink symptom the more certainly insanity and profound degenerations of the brain centers will follow. The asylum care and treatment of inebriates began first in this century and has grown and extended to all civilized nations of the earth. American asylums have developed the disease theory and the practical character of physical treatment in institutions, beyond that of any others in this field. Asylums in this country represent nearly all stages of development and early growth, from infancy and childhood with its feeble conceptions and infantile efforts, to the boastful assumption and over confidence of youth, on to the dawning truth of early manhood when reason and judgment begin to reign. A few of these asylums discern similar great truths, which may be stated with confidence as ideals toward which there is a rapid movement. Inebriate asylums must take the place of jails and station houses. Inebriate asylums should receive the incurable inebriates and make them self-supporting and build them up physically and mentally. Inebriate hospitals should receive the recent cases and place them in the highest conditions of enforced health and vigor, and thus return a large number to health and sobriety again. Inebriate hospitals should be self-supporting when once established. They should be managed on scientific business principles like military training schools. Inebriate hospitals should be built from money raised by taxes on the sale of spirits, on the principle that every business should be obliged to provide for the accidents which grow out of it. These are realities which every inebriate hospital is approaching and which all experience point out as practical in the near future. The inebriate hospitals of to-day are only in the infancy of their work, contending with great opposition and prejudice, misunderstood, condemned and working against innumerable obstacles. There is an intense personality in inebriate hospitals. Inebriate hospitals and their work are the great new lands which only a few settlers have

reached. They are calling to us to come and occupy, and thus help the race on in the great march from the lower to the higher.

#### LAWYER'S CRITICISMS OF EXPERT TESTIMONY,

by Dr. Clark Gapen, of Omaha, Neb.

The expert is an important factor in the various litigations that arise. As at present conducted, the trial of a case involving a medico-legal question is a mere farce as compared with the trial of a cause involving a pure question of law. Lawyers sometimes like to pose as learned in medicine. The expert should be selected by the court as advising it, and wholly with reference to his special knowledge of the question involved. We should teach medical jurisprudence in colleges properly. The so-called chair of medical jurisprudence usually teaches nothing but the mummery of some text book of ancient times. But the proper way is to give a forecast of what the student will encounter in the future. He should be taught to be frank, truthful, direct, plain and non-technical. Students go forth unequipped in this regard. Another cause of the disrespect of medical expert evidence is the common custom of participating both as counsel and witness in the trial. The court might properly take testimony as to the qualifications of the expert. A good way would be to have lists handed in by each side and let the court choose from the lists. The expert should avoid invading the province of the jury and giving an opinion on the case. The proper course is to put a hypothetical question for the expert to answer.

The following papers were also read:

1. Insanity in the Aged, by Dr. Frank T. Norbury, of Jacksonville, Ill.
2. Acute Mental Symptoms in Children, by Dr. Harriet C. B. Alexander, of Chicago, Ill.

A MODEL FOR CUPID.—“Well,” said the artist, sharply, to the tramp who had entered, “what do you want here? Hurry with what you have to say.”

“Sir,” replied the tramp, with inborn dignity, “I did not come here to be insulted. I merely thought to step in and inquire if you had any model for your valentine Cupid. If not I desire to apply for the position.”—*Lippincotts*.

A HARD SUBJECT.—The constitutional inability of some people to grow fat under the most favorable circumstances found an excellent example in the person of Mr. Ezra Sprawley, of Alderville. His wife's comical distress over the fact at last found vent in a remark which has passed into a by-word in that New England town.

“I used t' think,” said the good, energetic woman and admirable housekeeper in a pensive mood one day, “I *used* to think that food, cooked proper an' dealt out liberal, couldn't help puttin' some flesh on folks's bones.

“An I c'nsidered, previous to weddin' with Ezra, that 'twas owin' to the fact that his sister Jane was a scant pervider that he looked so terrible peaked; but I misjudged her—an' him, that's the truth.

“Why, jest look at him now,” said Mrs. Sprawley, dolefully, directing her visitor's gaze to the figure of her gaunt spouse as he stood in the barn door-way; “just look at him, thin as a match. Why, my land!”—here she passed to the portion of her remark which became historical:

“I've fed three hearty meals a day, reg'lar, to that man, for up'ards of fifteen years, an' he aint ever give the *just evidence* of 'em.”—*Youth's Companion*.

“A WRITER, who shall be nameless,” says *Figaro*, “sent a story to a magazine. It was returned in an incredibly short space of time, with the remark that it ‘lacked movement.’

“After some calculation, which disclosed the fact that the manuscript must have reached New York by one mail and left it again by the very next out-going train, the writer sent the manuscript back to the same magazine, with the remark that, considering the time it had made, he didn't see how they could expect a story to have a much swifter movement than that.”—*Lippincotts*.

ENGLISH AS SHE IS WROTE.—“In the week immediately preceding her death, Elizabeth Fuidge, while suffering under the illness of which she died and *in the immediate expectation of death who was then staying at Weston-super-Mare for her health*, told Mary Fisher to take the keys of the dressing case and box and to keep the same.”



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SATURDAY, OCTOBER 7, 1893.

## EDITORIAL.

### ECHOES FROM THE PAN-AMERICAN CONGRESS.

Among the subjects considered by the section of hygiene, quarantine, etc., none was more important than that involved in the following resolution emanating from and ably supported by Dr. Shakespeare of Philadelphia, Dr. Cyrus Edson of the New York Board of Health, and others:

*Resolved:* "That it is the sense of this section that in view of the prevalence of Asiatic cholera in Europe at the present time, and the constantly increasing number of foci of infection, immigration from European countries in which cholera exists should be temporarily suspended, as this action affords, in our opinion, the only certain means of averting a threatened invasion by the disease of countries of the American Continent."

Notwithstanding the importance of this resolution and the fact that it would have exercised a potent influence with our national health authorities in encouraging effective measures to bar out all visitation of an epidemic that has made fearful ravages in many sections of Europe dur-

ing the past two summers—our exemption from which is the reward of the efforts and precautions of zealous and intelligent health authorities—this resolution failed of favorable consideration by the International Executive Committee to which it was referred. The reasons for this failure are not plain. Few Americans doubt the wisdom of the policy it suggests. Had it been submitted to a vote of the Congress there is no doubt it would have had a large majority in its support.

The chief opponent of the resolution was from over the seas, whence, for a long time we have been getting a great number of people we do not want, and who have not contributed to our moral, social, political or physical well doing.

Just the extent of the influence of Mr. Ernest Hart, the able editor of the *British Medical Journal*, in defeating the resolution we will leave for those to determine who were personally present. We fail to appreciate Mr. Hart's logic.

Our National Congress in framing our quarantine law, incorporated a provision giving to the President the discretionary power "to prohibit in whole or in part the introduction of persons and property from such countries or places as he shall designate, and for such period of time as he may deem necessary whenever, by reason of existence of cholera or other infective or contagious disease" in a foreign country, there is serious danger of the introduction of the same into the United States, despite the quarantine defenses. The resolution in question was in support of this provision of our quarantine law. It was intended as a second to this provision by an able body of representative American physicians voicing the sentiment of the profession and of our people.

The Pan-American Congress was made up of representatives of the Americas, and should have been permitted to speak for America uninfluenced by English opinion. Cholera is indigenous to India, and all England has done or is doing for India is to garrison it. Let her put a military cordon about the birthplace of cholera and keep it within its native territory.

With our quarantine authority centralized we know where to look for its execution and whom to hold responsible for failures. Such resolutions, coming from the leaders of medical opinion, strengthen the hands and direct the conduct of those in authority. That we have not had a serious visitation of cholera has been largely due to our quarantine authorities under the zealous and intelligent direction of Surgeon General Wyman.

The politico-economic phases involved in the prohibition of immigration we do not attempt to discuss. Their consideration belongs more properly to those holding down chairs in our halls of legislation. There are facts, however, which cannot fail to press themselves home upon the American citizen and his law-makers (the

few who are Americans). They cannot escape giving thoughtful consideration to the facts that we have more than 2,000,000 idle men in the United States; that this idle class is being added to monthly by immigration; that in the one month of July last it received an addition of 47,000 immigrants exclusive of those coming in through Canada and Mexico. As the cholera scare increases in Europe, immigration will increase unless American governments as a matter of self-protection impose restrictions. The true way to keep cholera from gaining a foothold in the United States is to prevent it being brought here by immigrant or merchant ships.

While cholera has not gained a foothold in London, it has extended its ravages over many sections of Europe and England. London's comparative exemption is due to the vigilance of her health authorities and to improved sanitary regulations. Where it has once gained a hold the stamping out process has not been a success.

We will let our English brother speak in his own emphatic way. "My thesis is that cholera death is a violent death, an unnatural death, a preventable death; that the very existence of epidemic cholera, not to say endemic cholera, is a reproach to the nation and to the community in which it exists. Being a violent death its prevalence is due to ignorance or apathy, which, from the dimensions of a blunder, easily develops into the proportions of a gigantic crime. Cholera death can be prevented and ought to be prevented."

All this is what the intelligent of the medical profession and the people of our country claim—that it can be prevented and that this is the more effectually done by preventing the landing on our shores of immigrants from infected countries. To fail in such precaution would be a "gigantic crime."

Yet another resolution urging measures of sanitary precaution failed of adoption, though urged with earnestness and a strong array of arguments by the most eminent of American authorities upon the subject of the epidemics by which we are threatened and from which we have the most to fear. In this instance it is surprising that an educated profession should be behind the people—far less zealous in their care for the public health. The resolution in itself is easy reading, and will impress the reader of average intelligence with its value as a sanitary measure—it urged the thorough disinfection of every piece of baggage or article belonging to an immigrant or to any member of the crew of immigrant ships. Against this could be interposed only the influence of steamship companies. When once the steamship companies are made to understand the certainty and thoroughness of the inspection to which they will be subjected, as a matter of self-protection they will be more rigid in their own sanitary precautions. If this work is a burden it is certainly one more easily borne by rich steamship companies than is a typhus fever or a cholera epidemic by dense communities.

The lesson should be impressed that there is an element of murder by willfully and knowingly carrying of disease among people free from it, and that it is equally criminal to permit such carrying where prevention is possible. The extent of our coast, the number of ports of entry, the wealth and activity of our commerce, only render the more urgent and important rigid measures. It is preventive measures we should adopt and press to successful execution, and not wait until an epidemic gets its grip upon our people. Our immunity thus far should not be permitted to lull our people and health authorities into that sense of security which will leave open the avenues of ingress. Important as is our commerce, it can be

brought under such regulations as will not impose useless burdens or be productive of special embarrassment. All the commerce of the world brought into our ports will serve us little purpose if there is to come with it disease and death.

Among our own people regulations are imposed to prevent the transmission of epidemic or contagious diseases from one neighborhood or community to another, or along the lines of our inter-State commerce. These regulations are submitted to by our own people uncomplainingly, though they impose great hardship upon families and entire communities. It is recognized that the greater hardship would be to permit the disease to extend the territory of its ravages.

**HOW SHE KEPT HER WORD.**—"Do you remember that rich and romantic Miss Rocques, who used to say she would never allow a man's poverty to prevent her from marrying him?"

"Yes, indeed, but I never thought she meant it."

"She did, though. She's going to marry a man who doesn't own a dollar in the world, and is deeply in debt."

"Is it possible? Who is he?"

"I don't remember his name,—some sort of a broken-down earl her mother picked up in London."—*Detroit Tribune*.

**OLD SUBSCRIBER (to editor).**—Can you lend me five dollars?"

Editor.—"We cannot."

Old Subscriber.—"Paper not doin' much, eh?"

Editor.—"Well, we're holdin' our own."—*Lippincotts*.

**HOW A COLD AFFECTED HIM.**—A little boy caught a very severe cold while his mamma was out of the city, and on her return rushed up to her, and throwing his arms around her, cried, "Oh, mamma, both of my eyes is rainin' and one of my noses won't go."—*Lippincotts*.

A Pennsylvania testator recently provided that an interest in land devised to his daughter should, in case of her death without issue, be "reversible to my right consanguineal heirs."—*General Digest*.



## TRANSLATIONS.

ONE HUNDRED RADICAL OPERATIONS FOR INGUINAL HERNIA  
PERFORMED AFTER THE METHOD OF BASSINI.

Previous to 1891, the author, C. Nicodoni, had performed the radical operation for hernia, only in cases where the ring was much enlarged, or where adhesions had taken place, making it impossible to wear a truss.

After the above mentioned year, and since he had seen the brilliant results following the method of Bassini, he has operated on one hundred cases, the results of which he now places before the medical profession.

He calls attention to two principal steps in the operation which produce such satisfactory results: First, the application of the ligature high up on the peritoneal

covering of the sac. Second, the reconstruction of the posterior and anterior wall of the inguinal canal, by uniting the abdominal muscles with Poupart's ligament, and the accurate closure of the external oblique muscle.

Of the 100 radical operations there was one death after 16 days, due to pyæmia, the result of two septic ligatures; 5 healed secondarily, and in 94 union took place by first intention. The youngest patient was 2 years, the eldest 65. The patients were not instructed to wear any trusses after the operation.—(*Wiener Med. Presse.* 1893.)

## TREATMENT OF TUBERCULAR DISEASE OF THE HIP JOINT.

Dr. Zitzke (Inaugural dissertation), has made a study of 51 operated cases, occurring in the practice of H. Schmid in Stettin during the years 1887 to 1891, and concludes that resection of the hip joint affords best results in tubercular coxitis.

The result of these cases is as follows: The operation was performed in 47 cases, of which 11 died, making a mortality of 21.5 per cent.—4 directly referable to the operation; 31 were entirely cured, equaling 61 per cent.; 4 improved and 5 unimproved. Seventeen of the 31 cures had good use of the operated limb, 11 moderately good, and 3 not so good. In a later investigation of the 40 cases discharged, the author found 22 entirely cured, 4 having a small superficial fistula; of these 26, 3 had excellent use of the limb, 11 good use, 6 moderately good and in 6 there seemed some difficulty in deciding. Seven had died; 1 from a local return, 5 from general tuberculosis, 1 from diphtheria and 7 were lost sight of.

The author comparing these statistics with those of other methods of treatment, particularly of iodoform injections, concludes that resection, if not exactly an

ideal treatment, is, however, the most rational for this disease. He considers the operation indicated as soon as the disease has become fully established, particularly if crepitation can be demonstrated under narcosis. He places stress upon the removal of all tubercular matter when the resection is done, using the same care as he would in removing carcinomatous disease.

The after treatment is worthy of some mention. Extension is rarely resorted to; the limb is abducted, placed in a splint and bandaged. As a rule the patient is allowed to sit up on the third day and to get up on the fourteenth day, and is then encouraged to bathe and exercise.

As soon as possible the cane should be laid aside and walking encouraged by using the entire foot. A high shoe is never resorted to, the object being that the pelvis, on the operated side should incline downward. In order to avoid any flexion of the limb, the pelvis is raised during the night; lastly, exercises are systematically carried out, such as mounting steps, kneeling, sitting, etc.—(*Centralblatt für Chirurg.* 1893.)

## ABSTRACTS.

## IMMUNITY AGAINST "CHOLERA."

In a recent paper, Dr. Klein, has opened up a new question with regard to bacterial poisons, a question which before him was partially already touched upon by R. Pfeiffer. Klein showed that when emulsions of various cultures grown on agar agar, prepared in the same manner as that employed by Haffkine in his "anticholeraic vaccinations," are injected into the peritoneal cavity of guinea-pigs, the result is the same as that following on a similar injection of an emulsion of an agar agar culture of cholera-bacilli. Klein used cultures of cholera bacilli, of the vibrio of Finkler, the bacillus coli, proteus vulgaris, the bacillus prodigiosus, and the bacillus of typhoid fever. By means of intraperitoneal injections of non-fatal doses, he rendered the animals refractory against further intraperitoneal injections of fatal doses, and he found that "the refractory condition produced by intraperitoneal injections of a non-fatal dose of one of the above six species holds good against all the other five." He argues from his experiments that while employing agar agar culture in this manner, the bacilli are used without their specific poisons, and that the pathological changes produced in the animals under such conditions are due to the "protoplasmic" or "intracellular" poison of the micro-organisms; and that probably the "intracellular" poison of these different species of bacteria is identical, since they mutually protect the animals. He further contends that a notable difference exists between the "intracellular" poison and the toxins elaborated by the bacilli in the culture medium, and concludes that though protected against such "intracellular" poison by such methods of vaccination as practised by Haffkine, the animals are not necessarily protected against the toxins elaborated in the culture medium (for example, gelatine) by the bacilli. In proof of this, he mentions that guinea-pigs which have survived the intraperitoneal injection of fatal doses of Haffkine's *virus fort*, when subsequently inoculated intraperitoneally with old liquified gelatine cultures of cholera bacilli promptly succumb.

Hitherto it was generally believed that an immunity artificially produced against the bacillus itself was sufficient to protect the animal against the specific infection produced by such bacillus, and so far as immunity is concerned, no distinction was drawn between the "intracellular" and the "metabolic" poisons. Klein's researches suggested so many new questions of vital importance, that it seemed inviting to examine this matter more fully, and to investigate whether an immunity acquired against the "intracellular" poison will also be efficacious against a true specific infection with the same bacillus.

*A priori* it would seem sufficient to protect the animal in such a manner as to enable the organism to destroy the bacillus itself, thus giving the latter no time or possibility to elaborate its toxins, and no doubt for all practical purposes where preventive inoculation is likely to come into play, this would be all that is required. It is well known that in some cases it is difficult, in others even impossible, to immunise an animal against the specific toxin, administered in lethal doses, although small doses of such toxin introduced by subcutaneous or intraperitoneal injections will readily render the animal refractory against the microbe manufacturing the toxin. This is so well known that a few examples only need be mentioned here. Gamaleia has observed that guinea-pigs immunised against the vibrio Metschnikovi remain as sensitive to the toxin of this vibrio as non-immunised animals. Charrin and Gamaleia further have shown that this is true also for the bacillus pyocyaneus and its toxin, and Selander and Metschnikoff have confirmed the same for the microbe of hog cholera and its toxin. Isaëff, lastly, has demonstrated that rabbits immunised against infection with the diplococcus pneumoniae are, nevertheless, extremely sensitive against the toxin of this microbe.

It is thus evident that the acquired immunity against certain bacteria is not necessarily accompanied or followed by a resistance against the specific poisons of

such bacteria, although these poisons were employed to establish the immunity. These facts may explain Klein's remarkable result, that animals resistant against large doses of highly virulent comma bacilli succumbed to large doses of old liquefied gelatine cultures, since it is quite possible that the gelatine cultures used by him contained lethal doses of the specific poison in addition to the bacilli present.

We have repeated some of Klein's experiments, and extended them in various directions, and have obtained results which may throw some fresh light on the important question of the relation of immunity to the "intracellular" specific poisons. As might have been expected, we have been able to confirm most of Klein's results.

I. In our own experiments we have employed the bacillus prodigiosus, bacillus pyocyaneus, and the vibrio of cholera. Agar emulsions of any one of them injected into the peritoneal cavity of guinea-pigs proved fatal, the appearances being identical with those described by Klein. Whatever microbe was used for intraperitoneal injection, it was found that in all the fatal cases the bacilli had multiplied enormously in the peritoneal cavity, were almost invariably present in the heart's blood, and, when looked for, also found in the pleural cavity. This shows that death in all cases was due to a true infection and not an intoxication, as Pfeiffer assumed. The multiplication of the proliferation are a *sine qua non*, and are especially striking when small doses of agar emulsions are used. In regard to cholera infections. Gruber and Wiener have already pointed this out. A similar proliferation also invariably followed on fatal intramuscular or subcutaneous inoculations of the agar emulsions. On the strength of these facts it seems at least doubtful that the fatal lesions should be the result of poisoning by "bacterial proteins." It is more reasonable to assume that we are dealing here with a true infection.

(2) According to Klein, sterilised agar emulsions intraperitoneally injected produce the same result as the agar emulsion, namely, peritonitis and death. As far as cholera is concerned, R. Pfeiffer agrees with him. Gruber and Wiener, on the other hand, disagree, and come to

the conclusion that the "protoplasmic" poison of the vibrio has nothing to do with the typical infection. Our own experiments in this direction were limited, but we have failed to produce fatal results with sterilised emulsions prepared from half an agar culture of bacillus pyocyaneus and vibrio of cholera, although one-fifth of living agar emulsions sufficed to kill a guinea-pig. We have not followed up this matter, as it lay somewhat outside the purpose of this research, and we are thus unable to reconcile the contradictory statements of Klein and Pfeiffer on the one hand and of Gruber and Wiener on the other.

(3) As might have been expected from Klein's results, we found that the intraperitoneal injections of an emulsion of an agar-agar culture of the bacillus prodigiosus prepared in the same manner as that employed by Haffkine in his inoculations will immunise rabbits and guinea-pigs without fail against similar inoculations with agar cultures of the bacillus pyocyaneus. It is immaterial whether the immunising emulsion is given intraperitoneally or subcutaneously, or whether it is living or sterilised; the result is the same, and the animal will resist a subsequent peritoneal inoculation of a scraped agar culture of the bacillus pyocyaneus.

(4) *A fortiori* a subcutaneous or intraperitoneal injection of an emulsion of an agar culture of the bacillus pyocyaneus, sterilised or living, will immunise a guinea-pig or rabbit against a subsequent similar intraperitoneal injection of an agar culture of the bacillus pyocyaneus.

(5) This, then, is in full accordance with Klein's experiences, and requires no further comment. Now, if it be a question merely of one "intracellular" poison against another "intracellular" poison, a guinea-pig or rabbit immunised by the above methods might be expected to succumb to an inoculation with old but living bouillon cultures. It was found, however, that such animals resisted large doses of such cultures, which killed control animals in eighteen hours.

(6) Rats are insusceptible to anthrax, but extremely susceptible to an infection with the bacillus pyocyaneus. It was found that our white rats would resist enormous doses of anthrax cultures (eighteen hours old) scraped off agar agar,



and made into an emulsion, while they would die after even small doses of similar emulsions prepared with bacillus pyocyaneus, whether they had previously been treated with intraperitoneal injections of anthrax emulsions or not. From these results we must conclude that anthrax grown on agar agar contains no "intracellular" poison, or that if it does its "intracellular" poison does not immunise against that of the bacillus pyocyaneus. It should be mentioned, however, that though the anthrax cultures used were only eighteen hours old, there were already spores in many of the bacilli, although most of the bacilli were quite free from spores.

There seems to be some special relation between the so-called "intracellular" poison and the pathogenic property of a bacillus, or, differently expressed, if a bacillus is pathogenic to a certain species of animals, then its "intracellular" poison is also pathogenic. Again, if the "intracellular" poison be the same for various species of bacilli, then the lethal doses should be identical for the various bacterial species. Now, it is well known that rabbits are comparatively resistant against cholera infection, and we found that, in spite of injecting large doses of Haffkine's *virus fort* (a whole tube) intraperitoneally into even young animals, they were none the worse after it although one-twelfth of a culture of cholera bacilli would kill a guinea-pig. On the other hand, one-fifth of a culture of bacillus pyocyaneus intraperitoneally injected was invariably fatal to rabbits. Again, it required much larger doses of "prodigiousus emulsion" than of "pyocyaneus emulsion" to kill rabbits; the agar cultures least. And also in the case of guinea-pigs "pyocyaneus emulsion" was found to be more virulent than "prodigiousus emulsion." It appears, therefore, that there is something besides the "intracellular" poison which decides the fatal issue. In fact it seems that it is the active metabolism of the bacillus by which the specific toxic substances are produced in the body of the animal. Why is it that the one bacillus should protect an animal against another or several others, we do not attempt to explain. It may be a purely local immunity. How important the local predisposition and resistance are we know from various experiments, amongst which

we may refer to those of Blagovestchensky and Roger.

(7) While testing this question still further, we immunised guinea-pigs by Haffkine's method, and found that subsequently they resisted intraperitoneal injections of large doses of bouillon and even liquefied gelatine cultures of comma bacilli. So far as gelatine cultures are concerned, our results are in direct contradiction to Klein's. Our gelatine cultures were two month's old, and it is possible that they did not contain so much toxin as Klein's. Large doses were used, however, half a culture for each inoculation, which killed the controls in less than twelve hours. If we are justified in assuming that bouillon and liquefied cultures contain the specific cholera toxin, from our experiments it would seem that previous inoculations of non-lethal doses of agar culture emulsions immunise also against the comma bacillus *plus* its metabolic products. Moreover, we found that the converse holds good, namely, that,

(8) By means of subcutaneous injections of small doses of virulent bouillon cultures of comma bacilli, guinea-pigs are immunised against intraperitoneal injections of large doses of Haffkine's *virus fort*. We must conclude, therefore, that, after a typical infection short of death, the animal will easily resist the "intracellular" poison.

(9) The result was in no way modified when, instead of living bouillon cultures, cultures heated up to 70° C. for ten to thirty minutes were used for subcutaneous vaccination. Animals vaccinated in this manner comfortably resisted large doses of the *virus fort*. In most cases the cultures were not filtered; the issue, however, was the same when cultures were employed for protective vaccination which had been deprived of their bacilli by means of filtration through a Hankin's porcelain filter. Guinea-pigs treated with such filtered cultures proved resistant against Haffkine's *virus fort*. It is, of course, doubtful whether our filtered or heated cultures contained the true cholera toxin. Large doses of such sterilized cultures, which had been grown under ordinary aerobic conditions, failed to produce death. Others (van Emergen, Cantani, Nicati and Rietsch, etc.) have succeeded, by means of filtration through Chamberlain's filters, in obtaining more active

toxic bodies. Hueppe and Scholl again claim to have separated from cultures in eggs and choleraic dejecta extremely toxic substances. Gruber and Wiener have thrown considerable doubt on Scholl's results, at least so far as the toxin extracted from eggs inoculated with coma bacilli is concerned, and Hueppe's method of extraction of toxins from choleraic dejecta is naturally open to criticism. The whole toxicology of cholera is at present in a chaotic condition, and as yet we know but little of the nature of cholera toxins, and so long as the results of various investigators are so contradictory criticism is impossible. We have assumed that our bouillon cultures contain the metabolic products of the cholera bacillus. It is worthy of note, however, that even 5 c.c. of such cultures sterilized by heat injected intraperitoneally failed to produce death. Gruber and Wiener similarly found that the sterilized peritoneal exudation of animals which had succumbed to intraperitoneal injections of cholera bacilli, even when injected in comparatively large doses, had no fatal effect, while equal or smaller doses of the non-sterilized exudation produced death at least at the first transmission.

That a protection against an infection with coma bacilli can be effected by inoculation with sterilized or filtered bouillon cultures has already been shown by others, notably by Vincenzi, Gamaleia, and Klemperer, but we have further shown that this immunity holds good also against the inoculation of the intracellular poison or Haffkine's *virus fort*.

All these experiments throw some doubt on the too narrow or distinctive conception of an intracellular poison, and it seems that within certain limits the virulence of the poison varies with the pathogenic property of the bacillus—that is, with the power of its metabolic toxin. Immunity against bouillon cultures means also immunity against agar-agar cultures—that is, the "intracellular" poison and *vice versa*; and immunity against the latter implies immunity against gelatine cultures, unless, perhaps, these cultures contain an excessive dose of toxin. Immunity produced by any one method employed by us—that is, Haffkine's method or preventive inoculation with bouillon cultures, living or sterile, filtered or not—amounts to immunity against any other

form of inoculation, at least so long as we are dealing with the same bacillus.

It is no doubt difficult to explain why an intraperitoneal or subcutaneous injection of "prodigious agar emulsion" should protect rabbits or guinea-pigs against an intraperitoneal injection of pyocyanus agar emulsion, but that it is hardly a question of one intracellular poison against another seems probable from the fact that it is possible, by means of intraperitoneal injections of old bouillon cultures of the bacillus prodigious to render rabbits immune against intraperitoneal injections of "pyocyanus agar emulsion." The whole matter requires further study on broader lines, and this must be left for future investigation.

(10) The following observations also compel us to regard a too dogmatic or systematic distinction between "intracellular" and metabolic poisons in their relation to immunity with some doubt. Guinea-pigs are immunised against "cholera" by various methods, and their serum used to immunise other guinea-pigs. It was found that (1) the serum of an animal immunised by Haffkine's method will readily immunise another guinea-pig against Haffkine's *virus fort*; (2) it will also immunise against intraperitoneal injections of large doses of virulent bouillon cultures. Similarly it was found that the serum of one of us inoculated by Haffkine's method will immunise guinea-pigs against intraperitoneal injections of Haffkine's *virus fort* or virulent bouillon cultures in large doses. It may here be mentioned that it is quite immaterial whether the serum be injected subcutaneously or intraperitoneally, and that large doses of serum (4 to 6 c.c.) often caused severe and extensive ulceration of the abdominal wall when injected subcutaneously. In one case a copious intraperitoneal injection caused death in two days, the animal suffering from the usual symptoms of a subacute intoxication. In all cases, whether our own serum or that of immunised guinea-pigs was used, large doses of serum (2 c.c. and more) caused the animals to be ill and feverish for some time (three or four days). There was loss of appetite, and the coat was rough, and the animals hid themselves in the straw. It is quite possible, therefore, that the immunising serum contains

some active, if not the specific toxic substance.

11. It was further found that the serum of guinea-pigs immunised by repeated subcutaneous injections of bouillon cultures heated to 65° or 100° C. will immunise others against intraperitoneal injections of large doses of Haffkine's *virus fort* or virulent bouillon cultures.

One of us was treated by subcutaneous injections of virulent bouillon cultures, while at the same time large doses of sterilized bouillon cultures were administered per os, the gastric secretion having previously been neutralized with a solution of carbonate of sodium. In this case also the serum immunised guinea-pigs against Haffkine's *virus fort*. Unfortunately, we omitted to test the immunising power of our own sera before the auto-inoculations. Klemperer has shown that the serum of some normal individuals has a weak immunising action. It is, however, very slight compared with that of the serum after treatment. Now in our case the immunising power was well marked, since 0.25 c.c. readily immunised guinea-pigs against large doses of Haffkine's *virus fort*. The serum of normal guinea-pigs, so far as our own experience goes, has no immunising action whatever.

12. It should also be mentioned that some of us, having been inoculated with repeated subcutaneous injections of virulent bouillon cultures, subsequently, when his serum possessed marked immunising properties showed only slight local reaction against a large dose of Haffkine's *virus fort* (half tube.) This, again, tends to show that the view of the distinct kinds of poisons should not be taken too narrow.

The above-mentioned serum experiments are possibly of some importance if Klemperer's law of the specificity of immunising serum holds good for all cases. The Klemperers insist on the truth of this law, and Behring agrees with them. According to this law the serum of an animal immunized by inoculations with the bacillus prodigiosus would immunize against this bacillus only, and not against any other infection; and similarly the serum of an animal immunized against "cholera" should not immunize against an infection with the bacillus prodigiosus. This question has also been touched upon; it will, however, require further careful

and critical examination, because fallacies may easily be introduced by reason of the fact that the sera also of naturally immune animals have more or less marked immunizing properties.

We have found in accordance with Klemperer's law, that the serum of one of us treated by Haffkine's method will not protect guinea-pigs against intraperitoneal injections of "prodigiosus and pyocyanus agar emulsions." So far too few experiments have been performed, but if our results be confirmed and Klemperer's experiments with the serum of cholera patients taken into consideration, it would bring us a step nearer the elucidation of the etiology of Asiatic cholera. Judging from Klein's theory of the intracellular poison and from its unequivocal results, we might have expected that the serum obtained from a person treated by Haffkine's method would protect animals against intraperitoneal injections of both "prodigiosus and pyocyanus agar emulsions," but it was found that such serum will protect against any form of intraperitoneal injection of cholera bacilli only.

Without laying undue stress on the experiments just mentioned, we are led to the following conclusions after a survey of our own observations and those of others. As far as the cholera bacillus is concerned, (1) any one mode of immunisation will protect an animal against an infection by any other form of inoculation used; (2) the serum of an animal immunised by any one method also protects guinea-pigs against an infection by any one of the various forms of inoculation mentioned; (3) the distinction between an "intracellular" and a "metabolic" poison in their relation to artificial immunity must not be made too narrow.

We do not deny that an actual distinction between the metabolic and the protoplasmic poisons exists. Buchner's "proteins" apparently are what Klein calls the intracellular poison, and it is well known, from the researches of Buchner, Romer, and others, that the "proteins" produce reactions often different from those produced by the bacilli and their metabolic substances. Here, also, we must not be too exclusive. Whether Koch's tuberculin belongs to the proteins, as Buchner asserts, seems somewhat doubtful after the careful chemical studies of Hunter, but, on the other



hand, it is almost certain that it does not contain the specific toxin, at least not in a potent form. Now Vissman has shown that after injection dead tubercle bacilli scraped off agar agar into the ear vein of rabbits typical tubercles appear in the lungs and liver, which however, show no inclination towards caseation, but rather towards cicatrization. Unfortunately, Vissmann has omitted to investigate the influence of

such intravenous injections on immunity. If, however, as Klein and Buchner assume, tuberculin be the intracellular poison, then Kitasato has shown that by inoculations with this poison it is impossible to protect guinea-pigs against a tuberculous infection—a result which confirms our own conclusion that the “intracellular” poison against the bacillus and its specific toxin. —*Br. Med. Jour.*

#### IMPORTANT EXPERIMENTS TOWARD MAINTAINING PURITY OF THE MILK SUPPLY.

Though each hot season brings out the truth of the assertion that contaminated milk is responsible for much infant mortality, yet the public is but slowly moved from its attitude of indifference. Milk is one of the great foods, more important perhaps than any other, and is our main dependence in most cases of sickness and among the majority of children. The New Jersey commission, who, under the leadership of Dr. Coit, have given much time and thought to the investigation of the milk question, are convinced that a full supply of pure milk, if obtainable, would reduce the number of child deaths in summer one-half. The charitable experiment now being conducted by Mr. Nathan Strans at the foot of East 3d street, and which aims to supply sterilized milk to the poor, is worthy of praise of itself, and as calling public attention to the need of good milk.

Yet prevention is better than cure, and a supply of milk known to be pure would be better than a supply of milk treated to pasteurization for the killing of disease germs. Of course such processes as sterilization are a vast improvement upon the use of an impure article; but it is a question whether our real relief should not be sought in the direction of keeping the original purity of the milk intact rather than in destroying the bacilli after these have taken possession, since the process also takes from the milk something of its value as food. The important inquiry is whether this original purity can be maintained; and it is upon this point that the experiments of the New Jersey commission have much interest. No bacilli have ever been found in milk as it comes from the cow;

yet in a single drop kept warm for two hours, 2,500 germs were found. That is to say, Nature will furnish the food absolutely pure when taken from healthy animals under proper feeding; it remains for the wit of man to keep it so. This is clearly a difficult thing to do. The hands of the milker, the udders of the cows, the hay and straw of the barn, the nuisances of the stable, may develop the dreaded germs. Just because milk is so important and composite a food, it the more readily becomes the carrier of disease. The theory of Henry L. Coit, M.D., adopted by the New Jersey commission, is that the problem must be solved by the application of medical, chemical, and agricultural expert knowledge to the production of milk on the farm and its transportation to the consumer. Experiments on these lines are now being conducted at a model farm near Caldwell, N. J. If it can be shown by these rigid experiments that milk which shall be free from germs can be obtained and delivered pure to infants and invalids, the way will be open for a practical reform. Boards of Health and the medical profession generally will watch the results with great interest and hope. The investigation is being conducted by a committee who deserve the confidence of the public as disinterested men (they receive no compensation), and as scientists whose opinions can be relied upon.

One thing we must not shut our eyes to. Pure milk, like any other good thing of importance, will, when obtainable cost money and time. Dr. Coit says that the present laws of New Jersey are sufficient in our present state of knowledge, if they

were but enforced. Enforced they will not be until public opinion is aroused to the importance of a supply of pure milk. Moreover, the process of obtaining milk under stringent regulations is more costly than the old slipshod methods, and that extra cost must be paid by somebody. It is believed that this milk, certified to be germ-free and delivered in sealed bottles, can be sold for 12 cents per quart, though this is not yet certain. In Mr. Straus's charity, this extra cost is borne by the originator, the sterilized milk being sold at a little below first cost. If the State, for the protection of the people, should insist upon the rigid regulations which the Caldwell experiments may prove sufficient for purity, the result would be a general rise in price. At present the milk farmers of New York and New Jersey barely cover expenses in the low price which they are obliged by the competition with each other

to take. They cannot feed better fodder to their cows or take more precautions against germs or uncleanness, unless they receive a cent or two more per quart.

In spite of this obstacle of increased cost, which must be settled in some way in the future, the first question to be solved is whether purity in our supply can be obtained and kept by any means. It is this question which the New Jersey commission, to their credit, are attempting to answer. After we know the solution, we shall be in a position to consider whether the State should not undertake to secure pure milk through the enforcement of existing laws under a competent commission, and whether the several commonwealths which furnish New York City with milk cannot agree upon the precautions to be insisted upon.—*New York Evening Post.*

#### LEAVING CHILDREN TO THE CARE OF NURSES.

There is no duty of the mother so important, so sacred, as that of personally caring for her children, especially when they are very young. Duties to society, to education, to philanthropy, should all be secondary to this home duty.

When excuse can be offered for the woman who hires a nurse for her children and then gives up her time to so-called duties and pleasures which call her outside her home and away from the supervision of the nursery? It is not easily possible to secure for money, however liberally one may be able and willing to spend it, a person who will equal in refinement and education the child's own mother.

The care of children has been regarded as one of the lower occupations, and few educated girls will take the position of a nurse. Yet the brain and the thought-power of a child develop far more rapidly during the first two years of life than at any later period, and the child's disposition may be easily spoiled by injudicious handling. The difference between a fretful, cross child, making himself a nuisance to all around, and a sweet-tempered, laughing baby, is largely a matter of regularity and careful management.

The impressions received, the language spoken, and the directions taken by the child's mind, are those of the persons with whom he comes most in contact. It is for this reason that French and German nurses are often sought, that the child may easily and naturally learn a foreign language. One hour with the mother will not counteract the effect of twenty-three hours with the nurse. Even granting that the care of an intelligent nurse over the physical wants of a child is of more value than that of the mother (which I do not believe), the direction of mind is far better taken charge of by the mother. This is not advocating a precocious education for the baby, but simply that the budding mind may have the best atmosphere to unfold in.

Let me give a few examples of the false impressions that the little ones often receive from their nurses. Many children live in constant terror of the "bugaboo" who catches naughty ones in the dark, or the man under the bed who will come out after them if they are left alone. Or they are taught to fear mice, spiders, worms and other harmless lower animals. This fear is never natural to children, but is taught them at so early an age that

they seem to have been born with it. A little child who sees a worm for the first time feels only interest and curiosity about it. He laughs, and wants to put his finger on it, to see how it feels and what it will do. Some ignorant person says, "the worm is nasty" or the worm will bite you"—and the child ever afterward fears that he may be bitten or poisoned by a creature that has no weapons against the human race, and whose habits are intensely interesting to many older as well as younger people. There is nothing more ridiculous than to see a girl scream and run away from a tiny spider. I know a lady who was laid up three weeks with a sprained ankle, the result of her frantic attempts to escape from a little mouse, who was doubtless more frightened than she. Yet I cannot remember the time when I had the slightest fear of any of these creatures. My mother taught me that they were harmless and interesting. Teach a baby under two years this fearlessness, and his mind will never be influenced against his early teachings.

Little children are naturally cruel from ignorance, and need a gentle mind to teach them that an insect or a kitten can feel pain as well as they. The girl, at six years old, who drags her kitten around the yard by a string tied round its neck, began with a nurse who did not teach her to care for and protect all beings weaker than herself.

Can we trust the nurse to guide and develop the early sense of right and wrong? Too often she comes from a family or a race in which these distinctions are far from clear in the minds of the elders. The child soon learns that nurse does not always tell the truth, that her word cannot be depended upon, and he naturally imitates her in this respect. We see little children pushing one another away from the best place, seizing the best piece of cake or the largest orange. It is but natural to the human mind. But this little seed grows into the great tree of selfishness and carelessness of the interests of others, of which we see so much in adults. Some children scream and howl whenever their wills are crossed in any way. A firm hand to break this habit means comfort and peace for the family in the future. These lessons of fearlessness, of unselfishness, of

kindness and of self-control cannot be learned too early. The child who lacks these lessons develops into an excitable, high-strung, nervous being, a curse to himself and a constant anxiety to his parents.

Let us turn to the physical side of the baby's nature. If it were the custom to train young women to the care of well children, as it is to train them in the care of the sick, the nurse might be trusted with their physical welfare. But, unfortunately, our nurses are trained by experience only. All that is necessary is for a young woman to decide that she likes the care of children, and to present herself before the public in that light, to have her received, into some unsuspecting person's family and given the care of young children. She is probably ignorant of the rules of hygiene, of the needs of fresh air, and the ways of ventilating a room without a draft, of the proper temperature at which to keep her nursery, and the best ways of feeding children. She has seen her small brothers and sisters sit up all hours of the night, eat anything they can lay their hands on, and at any time they see fit to want food, and tumble about the floor as they like. These plans tried on her new charges soon bring about indigestion, bronchitis or irregular habits of sleeping. The results are but natural. In the absence of her mistress, she corrects her little charges at will; they learn to fear a blow, or to scream for whatever they want. The foundations are laid of ill-health and an excitable, unstable, nervous condition, which has much to do with the prevalence of nervous diseases in later years.

Am I depicting an extreme case? Then modify it for yourselves, and fill in the picture with other details. Let us take an "experienced" nurse. Can you safely trust her discretion in the matter of taking the children out in all weather and to all places? I know of a nurse who took two children, two and a half and five years old, to her home, where her father lay in bed, sick with smallpox. It was only by the description by the older child of "a man with sores all over his face" that the horrified mother learned where her children had been. The nurse had been so used to the presence of smallpox in a southern city that she knew no better. Many of the nurses whom I see on the



street are attending far more to gossip about their own affairs than to the welfare of their charges. If we fear to entrust our valuable bric-a-brac to the care of servants, how much more precious are these troublesome little comforts?

Then watch over your nurse in season and out of season; study hygiene and diet; find a physician not too busy to talk over these subjects with you, and let him teach you how to keep your children well, instead of coming to them only when they are sick; and never let your nurse think she knows more than you do about the care of children. Spend as much time as you can possibly arrange with the children,

and leave some of the cares of society and of charity to the women who have no "little darlings." A physician's wife said to me the other day, "I fear I shall not have time to come often to the club, as I am one of the mothers who are old-fashioned enough to take care of their own little girls." I went away, thinking what a sensible mother she was. Above all, teach your children to love you most of all, and not to cling to the nurse in preference to you. This will take time, but in it lies the hope of making them healthy, hearty and pure-minded.—*Mother's Nursery Guide.*

### ASIATIC CHOLERA IN ENGLAND.

The official notifications made during the past week prove beyond a doubt that our first line of defense has been forced, and that cases of Asiatic cholera have occurred in Hull and in Grimsby, not among ships' crews, but among permanent residents. The first recognized case was of a boy in Hull, on whom an inquest was held on August 25th. The inquiry was adjourned, in order that a bacteriological examination might be made. The material was transmitted to Dr. Klein, into whose custody it came on August 28th. Cultivations were immediately made, and on the following morning, August 29th, the sanitary authority in Hull was informed by telegraph that the case was undoubtedly one of Asiatic cholera. At the same time the information was transmitted to the Local Government Board, who at once despatched Dr. Thompson to Hull. As suspicious cases had occurred in Grimsby, where diarrhoea had been prevalent severely for several weeks, Dr. Reece was directed to proceed to that port. On August 30th a woman died with typical symptoms of cholera; a *post-mortem* examination was made, and Dr. Reece returned to London with a part of the ileum and some typical rice-water stool from this case. Cultures made from these specimens gave, after the usual intervals of about twelve hours, typical growths of the vibrio of Asiatic cholera, and on August 31st a telegram was despatched to Grimsby to this effect. On the following

day, September 1st, similar materials were received from a second case which had been subjected to *post-mortem* examination on that day. The cultivation test again gave unmistakable evidence of Asiatic cholera, and the Grimsby authorities were so advised on September 2nd. Meanwhile a woman who lived in the same street in Hull as the boy upon whom the inquest was held on August 25th had been taken ill, and died. A *post-mortem* examination was made on the same day; the cultivations again gave unmistakable evidence of Asiatic cholera. This case gave rise to a third, the woman's daughter, who, on receipt of the news of her mother's illness, went to nurse her, was taken ill within twenty-four hours, and died with symptoms of Asiatic cholera.

Since then other cases have occurred in Hull and Grimsby, which have presented symptoms pointing to Asiatic cholera, although the diagnosis has not been confirmed by bacteriological examination. Elaborate precautions are now being taken in both of these ports, but it cannot be denied that the position remains serious. The Mayor of Grimsby has addressed a letter complaining that exaggerated statements have appeared in the press, and that, "whilst Grimsby is sparing no expense or trouble in adopting the most stringent measures to prevent the introduction of cholera into this country, it is being ungenerously and cruelly treated in return."

It is inevitable, however, that considerable alarm should be felt throughout the country, although we are glad to recognize that there are no signs of panic. At the same time we learn with some surprise that the railway excursion traffic to Cleethorpes, which is a suburb of Grimsby, has not been stopped, although it seems to be made a matter of complaint that it has been perceptibly affected, the number of excursionists being several hundreds below the average.

It is astonishing to learn that the efforts of the Rotherham Corporation to induce the Manchester, Sheffield, and Lincolnshire Railway to abandon a special excursion train to carry people from Grimsby to Rotherham, to attend a football match, have been unsuccessful. The reason alleged is that there is no serious epidemic at Grimsby. The infection of Asiatic cholera is present in Grimsby, and Asiatic cholera, whatever the dimensions of the epidemic may be, is always serious.

That the continuance of excursion traffic may facilitate the dissemination of the disease is shown by the history of the case of Asiatic cholera which has occurred at Rotherham. The patient was a miner, who we learn, visited Grimsby on September 4th; he was taken ill on September 5th, and died the same day. Bacteriological examination proved that he had been suffering from Asiatic cholera.

Without wishing to bear hardly upon the sanitary authorities of Hull and Grimsby—brought face to face with a serious emergency the significance of which there may have some natural indisposition to recognize—we cannot help feeling that they would have been well advised to have had recourse at an earlier date to the bacteriological method of diagnosis.

Our Special Commissioner, who has visited Grimsby, furnishes us to day with facts which afford grounds for at least a strong suspicion that some of the cases of "cholera" and "diarrhoea" which occurred during the third week in August may have been really due to Asiatic cholera. Since August 20th 20 deaths have occurred in Grimsby from acute forms of diarrhoea, of which 18 have been returned "cholera" or "choleraic diarrhoea." The mortality, as our Commissioner points out, was high, and might well have aroused suspicion. The precautionary measures now in force are admirable, but it is possible that, had

a bacteriological examination been made a week earlier, they might have been then enforced with the effect of saving life and protecting the trade of the port of Grimsby from the serious injury which it is inevitable it must now suffer.

In the *British Medical Journal* of July 26th was published an article on the examination of cholera discharges, which explained fully the methods now in use in bacteriological laboratories, and we mentioned then the names of various laboratories in this country in which bacteriological work is carried on and in any one of which the necessary examination would, we have no doubt, be promptly made. It may be well to add that the best material to forward is either some of the rice-water stool, or, if the case has terminated fatally, a portion of the lower ileum about eight or twelve inches in length. If a specimen of the stool is sent it should be put in a glass stoppered bottle, previously washed out with spirit, and the stopper tied down and sealed. If a piece of the ileum be sent it should be tied above and below and placed in a wide-mouthed glass stoppered bottle, previously washed out with alcohol. In neither case should any preservative or other fluid be added to the specimen contained in the bottle. The bottle should be thickly wrapped in cotton wool and packed in a tin box. If no specimen of the stool or the intestine can be obtained a portion of a sheet soiled by the discharges should be cut out, folded, wrapped in guttapercha tissue enveloped in cotton wool, and packed in a tin box.—*Br. Med. Jour.*

**METRICAL EQUIVALENTS.** The metric nomenclature is coming into such common use, especially in scientific articles, that the following formulas will be found valuable:

**WEIGHT EQUIVALENTS.**

To convert grains into grammes multiply by.....	0.065
To convert grammes into grains multiply.....	15.5
To convert drachms into grammes multiply by...	3.9
To convert ounces (avoir.) into grammes multiply by.....	28.4
To convert pounds (avoir.) into grammes multiply by .....	453.6

**MEASURE EQUIVALENTS.**

To convert cubic centimeters into grains multiply by .....	15.5
To convert cubic centimeters into drachms multiply by .....	0.26
To convert cubic centimeters into ounces (avoir.) multiply by .....	0.036
To convert pints into cubic centimeters multiply by .....	473.
To convert liters into ounces (avoir.) multiply by .....	35.3
To convert gallons into liters multiply by.....	3.8

—Scientific American.

## CURRENT LITERATURE REVIEWED.

## THE ANNALS OF GYNECOLOGY FOR SEPTEMBER.

## The Operative Treatment of Backward Displacements of the Uterus

is the title of a paper contributed by Dr. Ernest W. Cushing. After reviewing the various operations proposed for the relief of the condition, the author presents the following conclusions:

1. That many cases of retroflexion, and most cases of retroversion, if uncomplicated, cause little serious disturbance, and require no operative treatment.
2. That severe retroflexion in the virgin, when giving rise to symptoms sufficiently severe to call for treatment, is best relieved by operation.
3. That cases of retroversion which cannot be made comfortable by simple measures, such as the use of a pessary, are usually obdurate, on account of some complication which requires operation.
4. That of the operations designed for the cure of retro-displacements, the only ones worth considering are the Alexander-Adams operation, the various methods of intra-abdominal shortening of the round ligaments, and ventro-fixation.
5. That there is a legitimate and useful field for Alexander's operation, subject to the following limitations: The uterus must be free, the diagnosis must be exact, the anatomical conditions must be favorable.
6. That when these conditions are not present it is better to make a median abdominal incision and act according to circumstances.
7. That after opening the abdomen, if no complications are present, the uterus may best be secured in ante-position by shortening the round ligaments internally, and by placing at each cornu of the uterus one suture which passes through the abdominal wall.
8. That the latter operation may properly be performed instead of that of Alexander if the surgeon prefers it, as it is equally safe and more reliable on the average.

Dr. C. D. Hurt contributes an article on

## The Etiology of Puerperal Eclampsia; Its Treatment.

After reviewing the various theories as to the causation of the convulsions the author says, in regard to treatment: If the increased sensibility is from an over-supply of nerve-force stored away for the woman in parturition, then veratrum and chloral are indicated. If a plethoric condition, the veratrum and venesection. If a truly anæmic and impoverished condition of the blood, then morphia and aromatic spirits of ammonia, with cautious use of veratrum. To secure prompt and decided relief when treating eclampsia, whether uremia is or is not present, unless the patient is very anæmic and with a broken down constitution, the author would, if she is of a full habit, draw twelve to twenty ounces of blood, then use hypodermically ten

to fifteen drops of Norwood's tincture of viratrum viride; then order a quart of warm water thrown into the rectum. If the convulsions are post-partum he would first use the viratrum and warm enema, and see that the bladder was well emptied. The author states that he has resorted to chloral and chloroform and would by no means ignore these. He dislikes the use of morphia because of its tendency to check the secretions. Apomorphia he believes to be valuable in many cases but he has had but little experience with it.

Dr. Herman L. Collyer discusses the

## Treatment of Vaginitis by Peroxide of Hydrogen.

The author states that he has been able to cure his cases more speedily by its use than any other means that he is aware of. It is his custom in the treatment of a case of vaginitis (purulent), first to wash the parts with warm creolin water in the strength of half a drachm to the pint, getting rid of all the secretion possible; then through a glass or rubber cylindrical speculum to thoroughly wash out the vagina. He uses peroxide of hydrogen (medical) plentifully, either full strength or diluted with luke warm water, and rubs the surface with a pledget of cotton, withdrawing the speculum at the same time (but not allowing it to come out) so as to allow the peroxide to get deep into the crypts, destroying the pyogenic membrane and the gonococci, if any have imbedded themselves in the epithelium: he treats the vagina throughout in this manner, and also the vulva, especially in the folds of the labia and the orifices of the Bartholin ducts. Having destroyed every vestige of the pus with the peroxide of hydrogen, he pours into the speculum about an ounce of a solution of nitrate of silver, half a drachm to the ounce, and coats the denuded membrane throughout, inserting a strip of iodoform or aristol gauze to keep the parts separated, swabbing the external parts with the same solution, fifteen grains to the ounce. This process is repeated every second or fourth day, as the case demands. The patient is instructed to remove the gauze on the following day and to use, in acute attacks, a cool, weak solution of the lotion plumbi et opii or a solution of muriate of ammonia two or three times a day. When the symptoms become milder, the use of astringents is necessary. In specific vaginitis the endometrium and the urethra have often become effected, and these cavities are treated in the same manner, of course observing the precautions necessary for each, in all cases securing free drainage.

Dr. J. A. Prince contributes a paper on "Prolapsus with Retro-deviations of the Uterus treated by Ventro-fixation." After reporting a number of cases the author concludes as the result of his experience that the operation is justifiable in many cases.



In the department of Pædiatry, Dr. Eugene Revilliod presents some "Clinical Notes on Nephritis as met with in Children."

In summing up he says that nephritis is often a primary disease in childhood; the cause may often be found in the influence of cold, but often there is to be found no circumstances capable of explaining its origin. The most frequent form, from a clinical point of view, is the acute; from an anatomical point of view it is the mixed. Albuminuria is an almost constant symptom. The quantity of albumin is most variable. It may be very abundant in serious cases. Slight nephritis may also give a large quantity of albumin in the beginning, but the quantity rapidly decreases. Anasarca is a less constant symptom than albuminuria, and collections in the serous cavities are rare. The complications that he observed could, in about all the cases, be attributed to the initial disease. This was the case especially with pleuro-pneumonia, several cases of endo-carditis, one of rheumatism, and two of peritonitis.

Dr. Henry N. Cattell contributes a paper entitled "Some Special Points on the Performance of Autopsies on the New-born."

The other contributions in this issue are: "A paper on Extra-uterine Pregnancy" by Dr. A. H. Cordier. "A Useful Addition to the Edebohl's Operating Table" by Dr. I. S. Stone. "The Treatment of the Retroverted Uterus, with special reference to the Value of Massage and the Author's Application of the Uterine Respiratory Movement," by Dr. D. H. Williams, and "A Favorable Termination of a much neglected case of Suppuration of the Appendix Vermiformis," by Dr. Z. H. Evans.

#### THE UNIVERSITY MEDICAL MAGAZINE

for September. Dr. John B. Deaver furnishes an interesting paper on

##### The Treatment of Appendicitis.

He proposes that the term intra-peritoneal inflammation should include all cases of inflammation in the right iliac fossa having their origin within the peritoneum and associated with lesions of the cecum or the appendix, for the following reasons: (1) He believes it impossible to differentiate between appendicitis, typhilitis and peri-typhilitis; (2) He believes the terms typhilitis and perityphilitis to be misleading, and as long as it is taught that they are distinct affections, independent of trouble with the appendix, just so long will the physician be misled as to the true character of inflammation in this region. He asserts that all inflammations of the right iliac fossa, excluding inflammatory affections of the overlying abdominal muscles, have their starting point in the appendix. All cases of appendicitis are divisible into five classes: catarrhal, obstructive (due to the presence of a foreign body, as a fecal concretion, an enterolith, a stricture, etc.), perforative, tubercular and relapsing.

The treatment which offers the best opportunity for permanent relief is that of immediate removal of the offending appendix as

soon as the diagnosis is established. His reason for adopting such a radical course has been forced upon him by the large number of cases he has seen perish when well-directed medical means had failed to afford relief, many of the patients being beyond surgical aid. While he has seen cases of acute appendicitis recover without operation, this has not been the rule, but the exception. Furthermore, being unable to subsequently observe the cases supposed to have recovered without operation, it is impossible to estimate how many of these suffered from relapses. If reliable statistics were available upon this point an arbitrary rule could be made.

The points he observes in making the incision for the removal of the appendix in acute cases where there is present a mass, be it pus or exudate, are the following: When the loin is rendered prominent by the mass or is the seat of edema, he takes it as an indication that the appendix holds a post-cecal or an external antero-lateral position or that it comes off from the apex of the cecum, and he carries the incision parallel with and a short distance above the outer third of Poupart's ligament, prolonging it outward if necessary. When the mass presents itself well to the inner side of the anterior superior spine of the ilium, he carries the incision through the semi-lunar line, rather through the rectus muscle immediately to the inner side of the semi-lunar line. The wound, when carried through the muscle, heals more solidly and, therefore, there is less likelihood of the development of a ventral hernia than when made through the semi-lunar line.

In concluding the paper he cautions against operation, when time is not an element, until the patient has been thoroughly prepared, that is, by rest in bed for two, three or more days, a limited but nutritious diet, and, most important of all, the free evacuation of the bowels. In acute attacks of appendicitis he always feels that the operation is certain to be a success if the patient has had two or more free evacuations during the day of operation; while, on the other hand, in acute cases when the bowels have been kept locked up with opium, he never feels sure of the result.

Dr. Joseph McFarland discusses the question

##### Are Coccidia Found in Cancer?

After carefully reviewing the opinions of the observers and workers in this subject, he deduces that from all the evidence, we are obliged to conclude that the bodies found in cancer cells and described as parasites, are not of such nature, but are phenomena occurring from disease and degeneration of the cells, and have nothing to do with the etiology of cancer. While he does not deny the possibility of the presence of animal parasites as well as bacteria in the ulcerated and degenerated portions of epithelial tumors, he is obliged to regard even this as unproven.

Dr. John C. Heisler contributes a paper on

##### Cystitis in the Female.

In almost every case, certainly in the majority, careful inquiry will disclose some er-

ror in diet or defect in digestion. Prominent among the former, is the habit of partaking freely, almost inordinately it may be, of acid fruits and of highly stimulating condiments. The sparing use of drinking water may be, at least, a powerful predisposing cause of bladder irritation, and if the patient is a heavy feeder, or is addicted to the free use of acids and condiments, will certainly very greatly aid in producing the disease. Gastric digestion, intestinal digestion and bowel evacuations having each received the physician's attention, he may next proceed to a physical examination of the pelvic organs. Whether there is flexion, version, descent, or other morbid condition of the uterus, should be noted, as well as the state of the ovaries. Tenderness of the urethra should be inquired for, by passing the finger along the roof of the vagina with slight pressure. It should

be borne in mind that anything keeping up pelvic congestion will interfere with the cure of the cystitis. That microscopical and chemical examination of the urine should always be made, goes without saying.

The chief indications for treatment are: (1) To remove any discoverable source or sources of irritation; (2) to render the urine bland; (3) to relieve pelvic congestion if it exist; (4) to treat locally the inflamed mucous membrane; (5) to improve the patient's general health; (6) to secure rest for the patient by keeping her in bed, at least in all acute cases.

The remaining paper is by Dr. James Wallace on "Glaucoma." In the clinical department is the report, by Dr. Francis Lieber, of the fractures treated in the dispensary of the Episcopal Hospital during the service of Drs. Davis and Van Pelt.

## PERISCOPE.

### MEDICINE

#### Embolism of the Popliteal Artery Following Diphtheria.

Rooney (*Occidental Medical Times*, April, 1893) reports a case of diphtheria which was followed by embolism of the left popliteal artery. Gangrene resulted, the line of demarcation extending obliquely from the patella in front downwards and backwards to the top of the belly of the gastrocnemius. Amputation through the thigh at the junction of the lower and middle thirds was performed, and the patient recovered.

#### Epilepsy.

Miller (*Edinburgh Medical Journal*, July, 1893) reports a case of epilepsy which was cured by the removal of a contraction of the slips of the palmar fascia going to the ring and little fingers of the right hand, and also the slitting up of a contracted prepuce. The fits used to commence by the fingers of the right hand becoming flexed, with the thumb over them; the arm then became flexed until the hand touched the shoulder. The rigidity extended to the right leg, and then became general, the patient losing consciousness. Some months after the operation the patient reported himself quite well.

#### Bathing After Excessive Exercise.

The popular notion of the injurious effect of a cold bath taken by one who is overheated from exercise, must possess—as all such ideas have—some basis in experience; and yet it is falsified by the experiences of athletes from the days of the Greeks and Romans even until now, who find in this procedure a refreshing and stimulating tonic after the exertion they have recently undergone. And,

physiologically speaking, a cold plunge or douche taken immediately after the physical effort, when the skin is acting freely and there is a sense of heat throughout the body, is as rational as in the experience of the athlete it is beneficial. It is paralleled by the tonic effect produced by the cold plunge when the skin is actively secreting after a Turkish bath, and finds its rationale doubtless in the stimulation of the nervous system, in the increase of internal circulation, and also in the renewal of activity to the cutaneous circulation after the momentary contraction of blood vessels due to the cold. The popular belief, doubtless, rests on the injurious effects which may be induced by the bath in one who does not resort to it immediately, but allows time for the effects of fatigue to show themselves on the muscles and nerves and for the surface of the body to get cool. Taken then the bath is more likely to depress than to stimulate, there is less power of reaction and greater liability to internal inflammations. At such a time a warm bath rather than a cold one is more suitable and more safe. It has been suggested, however, that the practice of indulging in a bath after violent exercise may initiate renal disease. Of this there is no evidence. The transitory albuminuria observed after prolonged cold baths may indicate the disturbance in the renal circulation which ensues upon them, but these cases are in a different category from those to which we are now alluding, nor are we aware of any facts to prove that even in them Bright's disease has been developed in consequence of the transient departure from the normal. Lastly, it must be remembered that those indulging in athletic exercises of all kinds are presumably sound in heart as well as limb, and that such persons may take with impunity, and, indeed, with benefit, measures which would be distinctly harmful to the weakly.—*Lancet*.

### Diabetes and Cirrhosis of the Liver.

Palma (*Ber. klin. Woch.*) describes two such cases from cases from the clinic of v. Jaksch.

(1) A man, aged 78, had suffered from increasing weakness for eighteen weeks. The skin was of a brownish color. There was considerable hepatic and splenic enlargement. The urine contained much grape sugar, but no bile pigment. The case is described as one of hypertrophic passing into atrophic cirrhosis. (2) A man, aged 43, began with slight jaundice four months previously. Two months later the abdomen began to swell, and, fourteen days ago, the legs. Ascites was present. The liver and spleen could not be felt. The urine contained grape sugar and occasionally, acetone, as well as bile pigment. A month later he died. The liver was found to be cirrhotic, the kidneys enlarged, and the pancreas healthy. The liver only contained a small quantity of glycogen. In such cases either the sugar-forming function of the liver is increased, and too much sugar gets into the blood, or the liver is not in a position to convert the sugar brought to it into glycogen. The question of alimentary glycosuria must also be considered. Here the limit for the assimilation of carbohydrates is diminished, and a permanent glycosuria may result. The effect of alcohol in this respect has been insisted on. The author draws attention to the pigmentation seen in his case, and refers to the condition of "bronzed diabetes." He concludes by pointing out (1) that the coexistence of these two diseases is very rare; (2) that the liver disease cannot as yet be looked upon as the cause of the diabetes, and that the latter may be a chance complication; and (3) that the name bronzed diabetes should not be used, as pigment may be absent from the internal organs in such cases, and in ordinary cirrhosis without diabetes this accumulation of pigment may also be present.—*Br. Med. Jour.*

### Relation between the Alkalinity of the Blood and Intestinal Absorption.

Castellino and Cavazzani (*Gaz. degli Ospitali*), have sought to ascertain whether, and if so how, the process of absorption from the intestine is modified in association with altered physical and chemical conditions of the blood; secondly, they have sought to establish how such changes of the blood influence in the human subject the general metabolism of the body. The study is not as yet complete, but the authors have ascertained the following facts: In distinctly alkaline serum, the reticulum of the hyaloplasm of leucocytes undergoes stimulation, which causes increased irritability and more active vital manifestations in the protoplasm. In liquids poor in alkali the protoplasm appears torpid and slow in its reactions, but in these cases contact with alkaline serum speedily evokes increased activity; Contact of faintly alkaline serum with leucocytes in a medium favorable to their activity depresses their movements, and accelerates the processes of degeneration. Serum which is but

faintly alkaline nearly always produces transparency of the protoplasm, and throws out the nucleus. From the above facts, the authors argue, first, that alkalization of the blood favors intestinal absorption; and, secondly, that as the passage of foods from the intestine through the lining mucous membrane is probably due in great measure to the activity of the cells lining the villi and to the leucocytes, alkalies would cause an increase in the rapidity of absorption by stimulating the activity of the protoplasm, and increasing its chemiotactic powers.

### Double Empyema.

Cassel (*Deut. Med. Woch.*) reports a case in a wasted child, aged four months, who was thought to have had an attack of influenza. On the left side there was well-marked bronchial breathing at the angle of the scapula behind, and from this point downwards on both sides the percussion note was impaired and the breath sounds ill-defined. In front there are no abnormal signs, and the apex beat was not displaced. The chest was opened on both sides in the sixth interspace,  $\frac{1}{2}$  litre of pus being let out on the right, and  $\frac{1}{2}$  litre on the left side. The immediate result was good. The improvement was not maintained, so that resection of rib was practiced. The child died later. Pleuritic adhesions were found everywhere except at the sites of the empyemata. A vomica was found in the left lung communicating with the pleural cavity. Many tuberculous foci were found scattered through the lungs. Double-sided pleurisy is not so very rare. The only treatment that could be practiced here was opening the chest. Tuberculosis of the lungs may, however, be a contra-indication. At this age the recognition of a tuberculous lesion in the lungs would necessarily be very difficult.

### Syphilitic Spinal Paralysis.

Kowalewsky (*Neurol. Centralbl.*) reviews the clinical features and differential diagnosis of the affection described under the above title by Erb and designated syphilitic transverse myelitis by Charcot. The disease is almost confined to males between 30 and 45 years of age; its development is slow; disturbance of the bladder function is often one of the earliest indications. Frequently, in addition to symptoms resembling spastic paraplegia, there are sensory disorders of diverse kinds, sometimes with trophic derangements. Spasticity of gait, however, is not always observed, and never is so marked as in lateral sclerosis; muscular rigidity and increase of deep reflexes also are less pronounced than in spastic paraplegia. Amongst 152 cases of syphilis of the central nervous system treated by the author during 1892 there were 38 affected with tabes and 21 with syphilitic spinal paralysis. In all the latter there was functional derangement of the bladder, mostly shown by inability to restrain detrusor action whenever the desire to



micturæ arose. The rectal function was similarly deranged in many of the cases. Increased myotatic irritability was a constant condition. Great exaggeration of the "thermic reflex" in the lower limbs was found to be a characteristic peculiarity of the disease; cold or heat applied to the lower extremities evoked strong convulsive contraction. The psycho-physical reaction time for tactile and painful stimuli was normal or slightly shortened—an opposite condition to that obtaining in tabes.—*Br. Med. Jr.*

### Large Doses of Digitalis in Croupous Pneumonia.

Mario Bellotti (*Gazz. degli Ospitali*) treats of the virtues of digitalis in croupous pneumonia, the present paper being a continuation of a similar one published a year ago. His conclusions from a large number of observations on cases in which Fraenkel's diplococcus has been detected are as follows: (1) All cases of fibrinous pneumonia, due to Fraenkel's bacillus, receive very great benefit from large doses of infusion of digitalis, always accompanied by milk diet, and occasionally by bleeding. (2) It is necessary to give the digitalis in very large doses, because in pneumonic conditions, both the gastric catarrh which is usually present, and the diminution of HCl of the gastric juice reduce greatly the amount of the drug which actually passes into the portal circulation. (3) Some of the active principles of digitalis seem to exercise a special elective action on the pneumonia toxins, this action taking place chiefly in the liver.

### Artificial Delivery in Copenhagen.

Th. Hansen states that in Germany, after the introduction of antiseptics, accoucheurs seem to have been more disposed to resort to artificial delivery, the mortality being thereby increased. This is not the case in Denmark. Hansen has consulted the registers of the midwives of Copenhagen, who are compelled to register every delivery in their practice, and who attend all women in labor, and has compared the number of artificial deliveries, in that city from 1862 to 1869, with those made from 1888 to 1890. The following are his figures:—

	Deliveries.	Forceps.	Version.
1862-69	17,887	305 (1.71 per ct.)	120 (0.67 per ct.)
	Deliveries of Placenta.		Artificial Deliveries.
	132 (0.74 per ct.)		557 (3.10 per ct.)
	Deliveries.	Forceps.	Version.
1888-90	16,639	275 (1.65 per ct.)	70 (0.42 per ct.)
	Deliveries of Placenta.		Artificial Deliveries.
	115 (0.69 per ct.)		450 (2.77 per ct.)

—*Hospitals-tidende*, 1893, p. 476.

### Myositis Ossificans.

A case of myositis ossificans, in a young man of 20, is reported by Brennschön. Many muscles were involved including those of the back, the boundaries of the axillæ, the del-

toids, serratus magnus, biceps, brachialis anticus; neck muscles, abdominal muscles, and those of the thigh.—*Berliner klinische Wochenschrift*, November 14, 1892.

### Complete Reunion of Severed Fingers.

Finney sutured the ends of the ring and middle fingers in place seven hours after they had been cut off by a machine. Firm union took place within two weeks. When seen, at the end of three years, motion and sensation were complete. Antiseptics were avoided because they form a thin layer of coagulation-necrosis, which might interfere with union.—*Johns Hopkins Hospital Bulletin*, October. November, 1892.

### SURGERY.

#### Operation for Umbilical Hernia on the Newborn Child.

Berger (*Nouvelles Arch. d'Obstet. et de Gynec.*) successfully operated on a female child thirty hours after birth, and exhibited it afterwards at a meeting of the Obstetrical and Gynecological Society of Paris. The infant was born strong, breathing well. The umbilical hernia was of the size of a small hen's egg, and covered by the membranes of the cord. There was a distinct neck or pedicle as thick as a man's forefinger, and made up of integument alone, which was united to the membranes by a deep groove. The lower part of the hernia was reducible, and the sac was there transparent. Coils of small intestine showed through it; they could all be pushed back into the abdomen. The upper part was irreducible, and in close relation with the vessels of the cord. After birth the hernia and abdomen were well washed and dressed with iodoform. On the next day the hernial sac was opened, and the small intestine reduced. The irreducible portion consisted of the cæcum, the appendix, and about one-third of the large intestine, all intimately adherent to the membranes of the cord. A layer of these membranes had to be detached and reduced, together with the bowel. This manœuvre could not be done until a free incision had been made along the median line, as in abdominal section. The sac was excised. The peritoneum, the aponeurosis, and the skin were separately sutured. The operation lasted an hour and a quarter. The sutures were removed on the tenth day; recovery was complete at the end of a fortnight. Gueniot, in the discussion on Berger's case, referred to Lindfors's invaluable monograph "On Umbilical Hernia," which appeared last January in Volkmann's *Vorträge*. He said that, as in adults, very minute particulars of each case of this operation in infants would be needed. Nothing differed so much as two umbilical herniæ. Other abdominal viscera besides the intestine may lie in the sac, inseparably adherent, and the abdominal cavity may, by congenital defect, be much too small to hold all the herniated structures.

## NEWS AND MISCELLANY.

## Gulling the Public.

A recent trial has again brought this subject into the newspapers, and has let some light into the inner working of so-called "cures" for consumption, and into the methods by which "cases" are worked up, the books and pamphlets "puffed" by even respectable newspapers.

The whole story is pitifully sad. At one time a respectable medical practitioner deviates from the path of rectitude, is guilty of "infamous conduct in a professional respect," and his name is removed from the Medical Register. A book is then published called "Prevention and Cure of Consumption." This book is just as valuable as all these kind of books are, and the medicines they recommend are not worth the paper they are wrapped up in. But there are plenty of interested people, including proprietors of newspapers,—especially religious newspapers,—ready themselves to puff such books or to introduce into their pages mendacious advertisements. Such books and medicines are not only useless, but they are dangerous. It was said by the defendant, who ought to know, seeing he had been "dispensing the medicine for 15 years," that the medicine contained "enough strychnine to kill 2,000 people in a year, also morphia and chloroform."

The presiding Judge—Mr. Justice Wright—showed more than usual common sense in medical matters, as will be seen from the following cross-examination:—

Upon taking his seat his Lordship inquired whether the plaintiff was in court, and counsel replying in the affirmative, required him to go into the witness-box. He then told plaintiff, Mr. Alabone, that he need not answer the questions unless he liked. There was, he said, a large number of what were called press notices, purporting to be reprinted from the *St. Stephen's Review*, the *Christian World*, the *Guardian*, the *Echo*, the *Observer*, the *John Bull*, the *Advertiser*, the *Whitehall*, and the *Court Journal*.

Refer to page 249 of the *Guardian*. Is that your own composition?—Not that I am aware.

What do you mean by that answer? Did you write it or not?—I did not. (Witness was understood to say that he might have read and corrected a proof.)

Were any of these opinions paid for as advertisements?—No, but advertisements were to be given on condition that a notice appeared. I read the proofs.

Do you mean to say that the *Guardian* made that kind of a bargain?—I cannot say. The *Echo* certainly did.

Do you mean to say that the arrangement was made by the *Guardian*, *Observer*, *Echo*, &c., that they agreed to insert praises of your book if you would give them an advertisement?—I don't know about praises, but they gave notices of the book.

No payment was made to the *St. Stephen's Review*?—The only payment was a certain number of copies.

His Lordship questioned the witness as to whether payment had been made to any of the above papers, mentioning them *seriatim*, and the witness replied that no payment had been made. In like manner the plaintiff denied that any payment had been made for testimonials.

Questioned about lacnanthe, he said it came from New Zealand. He mentioned the names and addresses of the firms from whom he bought it, and wrote down a name and address of a person from whom he procured the root itself. In like manner he wrote down by the judge's direction the materials that entered into the composition of the lacnanthe recipe.

At the conclusion of his evidence his Lordship said: This is an action brought by plaintiff to restrain Mr. Morton from pirating certain medical testimonials, and from dishonestly making use of professional information obtained by the defendant whilst acting as confidential clerk of the plaintiff, and from representing that certain so-called opinions of the press relating to the plaintiff relate to the defendant. The plaintiff is a person who was once qualified to practice as a surgeon, but who has been struck off the register. He nevertheless continues to practice as a surgeon. He also prescribes, prepares, and sells drugs for non-surgical purposes, thereby subjecting himself to penalties under the Apothecaries' Act. The defendant is a person who never had any qualification, but who having learned the business from the plaintiff, is now following it as a rival on his own account, with the addition that he represents some of the plaintiff's pretences to be his own property. He admitted engaging with the plaintiff in what he acknowledged to be a criminal conspiracy to defeat the provisions of the Medical Acts, and he admitted—whatever his admission may be worth—having been a party to wholesale illegal supply of strychnine and other poisonous drugs. The plaintiff's book is designed to puff an alleged specific for consumption which it is not uncharitable to suppose inert, if not injurious. It is recommended by so-called opinions of the press, and by statements of cases of alleged cure, and by alleged testimonials from patients. The alleged opinions of the press have every appearance of being not independent opinions or real notices, but paid or arranged notices or advertisements. The alleged cases do not appear to correspond with the case books from which they are said to have been taken. The alleged testimonials are, no doubt, in some cases written by patients in good faith, but many of them have a highly suspicious character and are suggestive of concoction or purchase. In this connection his Lordship observed that there were circumstances which indicated that the suspicions roused by a perusal of the plaintiff's book were well-founded. The learned Judge proceeded: When taken with the other admitted facts in relation to the plaintiff's business they oblige me to think that the business may probably be a cruel and nefarious system of obtaining money by false pretences from persons who are induced to believe themselves

consumptive. If this is so the law will not lend it aid to protect a book published as part of such a scheme. No doubt the case is not at present carried beyond grave suspicion, but where ground for such suspicion exists I think the Court ought not to act blindfold. It was not for the interests of either party to assist Justice in reference to these considerations, and I am unable to reply upon or accept the evidence of either party except to a very limited extent. There will, therefore, be further inquiry by the official solicitor and Public Prosecutor to inquire of the newspapers whether these notices were paid for or in any way arranged. Either party may, if so advised, put the case in the paper for judgment on July 3rd. In the meantime the books and papers will remain in my custody.—*Pop. Med. Month.*

### ARMY AND NAVY.

#### U. S. MARINE HOSPITAL SERVICE FOR THE SIX WEEKS ENDED SEPTEMBER 16, 1893.

Murray, R. D., Surgeon; to proceed to Pensacola, Florida, for temporary duty, August 10, 1893; to rejoin station, August 18, 1893; to proceed to Brunswick, Georgia, for temporary duty, September 14, 1893.

Bailhache, P. H., Surgeon; to assume charge of inspection of immigrants, August 14, 1893; detailed as chairman board for physical examination of keepers of Life Saving Stations, August 18, 1893; relieved from duty as Inspector of Immigrants, August 22, 1893; detailed as chairman board for physical examination of officers, Revenue Marine Service, September 12, 1893.

Purviance, George, Surgeon; to report at bureau for temporary duty, August 6 and 10, 1893; detailed as chairman board for physical examination of Surgeon John Vansant, August 23, 1893.

Vansant, John, Surgeon; ordered before board for physical examination, August 31, 1893.

Hutton, W. H. H., Surgeon; to report at Brunswick, August 10, 1893; to proceed to Cape Charles Quarantine as Inspector, August 12, 1893; to proceed to Brunswick, Georgia, for temporary duty, August 12, 1893; to rejoin station, Detroit, Michigan, September 10, 1893.

Hamilton, John B., Surgeon; granted leave of absence for four days, August 16, 1893; granted leave of absence for ten days, August 29, 1893.

Sawtelle, H. W., Surgeon; detailed as member board for physical examination Life Saving Station, August 18, 1893; detailed as member board for physical examination of Passed Assistant Surgeon, H. T. Goodwin, August 22, 1893; detailed as member board for physical examination officers Revenue Marine Service, September 12, 1893.

By direction of the Secretary of War, leave of absence for four months, on Surgeon's certificate of disability, is granted Lieutenant Colonel Francis L. Town, Deputy Surgeon General U. S. Army.

Austen, H. W., Surgeon, Detailed as recorder Board for physical examination of Surgeon

John Vansant August 23, 1893. To represent the Service at Meeting Pan-American Medical Congress, September 5, 1893.

Gassaway, J. M., Surgeon. To inspect local quarantine at Pascagoula, Miss., August 23, 1893.

Mead, F. W., Surgeon. To proceed to Chicago, Ill. for temporary duty August 9, 1893.

Carter, H. R., Surgeon. To proceed to Fernandina, Fla. to inspect quarantine, and return to Bureau, August 7, 1893. To proceed to Pensacola, Fla., August 10, 1893. To proceed to Brunswick, Ga. for temporary duty, August 12, 1893. To report at Bureau Aug. 31, 1893. To represent the service at Pan-American Medical Congress, September 5, 1893. To proceed to Philadelphia, Penna., and Reedy Island quarantine September 9, 1893. To proceed to Cape Charles quarantine and assume Command, September 11, 1893. To report at Bureau for temporary duty, September 13, 1893.

Wheeler, W. A., Surgeon. Detailed for duty at Camp Lou., August 14, 1893. To rejoin station August 22, 1893. Detailed as Recorder Board for physician examination P. A. Surgeon, H. T. Goodwin, August 22, 1893.

Carmichael, D. A., Pass-Asst. Surgeon. Granted leave of absence for thirty days, August 16, 1893.

Peckham, C. T., Passed Asst. Surgeon. Granted leave of absence for twenty days, August 10, 1893.

Glennan, A. H., Passed Asst. Surgeon. To proceed to Reedy Island quarantine for temporary duty, August 30, 1893.

Magruder, G. M., Passed Asst. Surgeon. To proceed to Pensacola, Florida, as Inspector, August 10, 1893. To proceed to Brunswick, Ga., for temporary duty August 23, 1893. To proceed to Beaufort, S. C., as Inspector, September 9, 1893.

Kinyoun, J. J., Passed Asst. Surgeon. Detailed as Inspector New York quarantine, August 12, 1893. Detailed as member board for physical examination of P. A. Surg. H. T. Goodwin, August 26, 1893.

Goodwin, H. T., Passed Asst. Surgeon. Granted leave of absence for thirty days, August 10, 1893. To proceed to Louisville, Ky., for duty August 15, 1893. Ordered to appear for examination as to physical condition, August 22, 1893.

Varighan, G. T., Passed Asst. Surgeon. To represent service at meeting of Pan American Medical Congress, September 5, 1893.

Geddings, H. D., Passed Asst. Surgeon. To report at Bureau for temporary duty, September 13, 1893. To proceed to Brunswick, Ga. for temporary as Inspector, September 15, 1893.

Cofer, L. E., Asst. Surgeon. To proceed to Savannah, Ga. for duty, August 25, 1893.

Decker, C. E., Asst. Surgeon. To proceed to San Francisco quarantine for temporary duty, September 8, 1893.

Nydegger, J. A., Asst. Surgeon. To proceed to Jersey City, N. J. for temporary duty, September 2, 1893. To rejoin station, Sept. 9, 1893.

Oakley, J. H., Asst. Surgeon. To Proceed to Quebec, Canada, for duty August 26, 1893.